WONDERLAND '98

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THE FIRST TOUCH OF FROST — FLATHEAD RESERVATION, MONTANA.

Wonderland '98

BY

OLIN D. WHEELER.

READ IT

THEN PROFIT BY YOUR
READING AND GO AND

SEE IT.

REACHED BY THE

NORTHERN
PACIFIC RAILWAY.

ILLUSTRATED

Copyright, 1898,
By CHAS S. FEE, General Passenger and Ticket Agent,
Northern Pacific Railway,
St. Paul.

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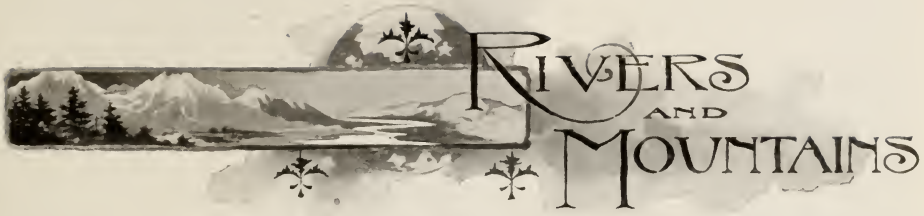


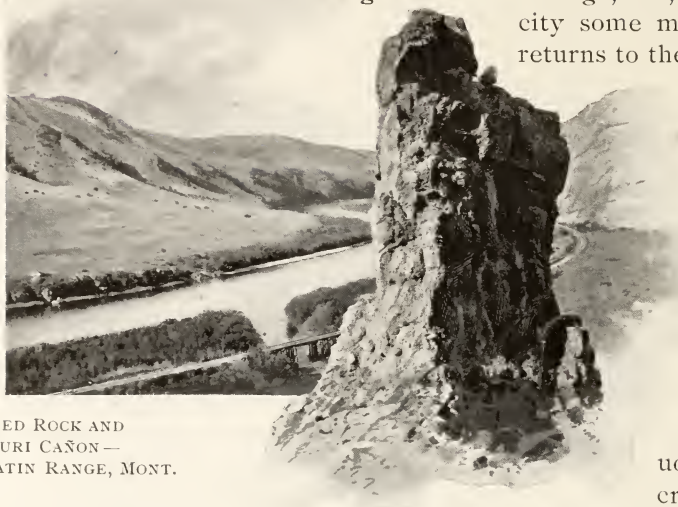
A RAILWAY journey across a plain in time becomes tiresome. The slight variations in topography, the flying houses and hamlets, the long freight trains, whether puffing heavily along or resting lazily on the side tracks while the express train whizzes past, are not sufficient to break the inevitable monotony. That railway ride is the pleasantest and most instructive that carries the traveler through the most varied landscape. Contrast and antithesis are needed. Then, each element of scenery — plain, mountain, forest, water, valley, cañon, town, city; yes, even desert — has its proper weight or influence in creating an agreeable whole.

We know that this is true of a short trip, one of but a few hours' duration; how much more so, then, of a long one! Viewed in this light, the journey of 2,000 miles over the Northern Pacific, or any other line, may well be studied seriously.

Without intending invidious comparisons, it can, I think, be fairly and truthfully stated that no line of equal approximate length affords more and greater diversity of scenery than does this. Without taking account of the shining lakes of the Park Region of Minnesota, or of the lesser streams beside which the bands of steel wind in curving flashes of light, there are nearly 1,000 miles of large and beautiful waterways along which the transcontinental trains of the Northern Pacific hold their way. Three times do these trains cross separate portions of the Rockies and once the Cascade Range. Here, then, are two of the most important features of a landscape—water and mountains—found, sometimes in pleasing alternation and again in conjunction.

Let me particularize:

Leaving St. Paul the valley of the Mississippi is followed to Little Falls, 108 miles. As the traveler leaves St. Paul he is on the eastern bank of the river. Entering Minneapolis the train skims across the river on a

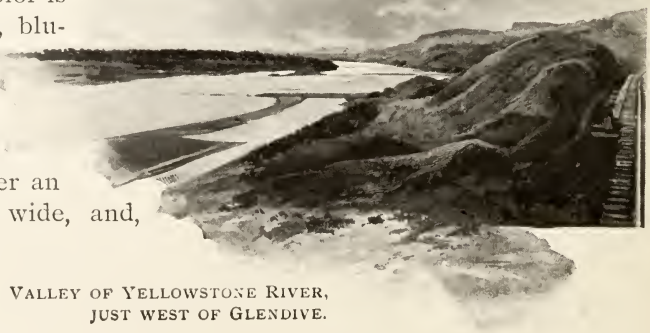


PAINTED ROCK AND MISSOURI CAÑON — GALLATIN RANGE, MONT.

graceful steel bridge, and, where it leaves the city some miles distant, again returns to the eastern bank. At Little Falls it again crosses to the western bank and leaves the stream and valley.

Far to the west, after crossing two States, the train enters a third, and, following the sinuosities of a Montana creek, rolls out upon the southern bank of the Yellowstone River at Glendive. For 341 miles it then follows the banks of this wide, rolling stream to Livingston.

The Yellowstone is one of the largest rivers of the West. The history of the valley is one of subjugation—first, of the bison; second, of the Indian. On certain maps the sign of the diminutive crossed sabres can be seen at many places in and adjacent to the valley, signifying old battle-grounds where the white and the red man contended for the mastery. That day has gone, never to return. The advent of the railway signalized the doom of the red man's occupancy, however just and righteous it may or may not have been. The track of the iron horse lies principally along the south bank of the river. For mile after mile the train thunders onward near enough to the stream so that the traveler can dreamily note the eddyings and movements of the water. Except at occasional periods of low water the Yellowstone fills the wide channel from bank to bank, and is a stream of much dignity and volume. The color is usually of pleasing, bluish green, becoming more clear and green as the upper valley is reached. The bottom lands often cover an area several miles wide, and,



VALLEY OF YELLOWSTONE RIVER, JUST WEST OF GLENDIVE.

again, will be pinched down to rather a small compass as regards width. The sides of the valley are generally formed of palisades of yellowish gray or dun-colored cliffs, very different in appearance from the brilliant, strong tones of the Pyramid Park bluffs and pyramids in North Dakota. Sometimes the track skirts these bluffs, and at other times is far from them. The upper valley becomes gradually more pleasing. Mountains appear in the distance. Near Big Timber the Crazy Mountains to the north form a constantly changing panorama as the train changes direction. At Livingston the Snowy Range to the south seems almost to hover over us.

Leaving Livingston the scene changes entirely. Now the mountains come and swallow us up. Around us, on all sides, over us they hang, and

CRAZY MOUNTAINS — UPPER YELLOWSTONE VALLEY, MONTANA.

through wild passes and cañons the train holds its way until the Gallatin Valley and river is reached. Now the river and wide, green valley flanked by massive snow-covered mountains, greet the eye. The river soon joins with its fellows, the Jefferson and Madison, to form the Missouri. The train is soon following the curves of the latter, a small, clear, rushing stream, far, far prettier than the muddy river seen between Bismarck and Mandan in North Dakota.

Again, when the river is left behind, the mountains come to us. Beyond Helena the Rockies are again ascended. As the train slowly gains altitude, they lie around in great chunks, as it were, almost bare of trees and mutely bearing witness of honorable age and showing the evidences of constant warfare with time and the elements. At the summit the Mullan Tunnel furnishes the means of crossing to the western side of the range. Almost from the beginning of the ride down the western grade a small stream is followed. At Garrison it assumes larger proportions and becomes the Hellgate River. From Garrison to Missoula the river and the rails are boon companions. High over both stretch the mountains—we are in the heart of the Rockies.

In serried heights they fly past. We crane our necks to gaze at some

1. Mission Range — Flathead Reservation, Montana.
2. On the Coeur D'Alene Branch. 3. Eagle Butte and Yellowstone River, Montana.
4. Along the Bitter Root River. 5. Skirting the Bitter Root River.

riven rock high in air, or admire the deep green, pikelike trees that in solid phalanxes line the slopes, only to again drop them to admire the silvery river as it winds through the cañon beside us.

When Missoula is reached we suddenly burst from the pent-up cañon out into the broad light and day of a charming valley. Away to the south the heavy fringe of green betokens the Bitter Root River flowing toward us. Over beyond and high above, keeping faithful vigil over the valley, rises Lolo Peak, a clear-cut monolith. Toward the west we can see another nipple mountain distinctly clear among an array of its fellows. We shall again see this graceful cone from the north and nearer to us. To the north the pine-trimmed giants rise in terraces that wall in completely the beautiful valley. Toward the west those familiar with the topography can discern the pass or notch in the mountains through which we shall soon make our way.

NEAR FORT MISSOULA.

Slowly our long train is pulled mountainward by two huge locomotives, after we leave Missoula. Hither and thither, this way and that, now clinging to an excavated bluff, now shooting across a fill, we go. For a good part of the time we can see the steeds of iron at the head of our train as they pant and groan in their prodigious efforts to reach the summit.

Crossing Marent Gulch on a steel trestle of gracefulness and strength, the notch in the mountains is soon reached. A stop, one engine uncoupled and run on to a side track, and then we start on a long down grade. The gulch widens, the swift-moving train rushes out into open country and whirls down the grade, revealing each moment an expanding and increasingly interesting scene. Cattle and horses, blanketed Indians, cabins and smoke-begrimmed tepees swing into view. Over at the base of the mountains — the grand old Mission Range — the Flathead Indian Agency is seen. The Jocko River is reached; soon it becomes the Flathead, and ere long we know it as Clark Fork and admire the wide, swift river as it winds beside us to Lake Pend d'Oreille.

The Clark Fork Valley is not a wide one, nor is it as yet thickly settled,

It is a picturesque valley, a fertile one, full of interest to the traveler. For mile after mile we hug the shores of the stream. We note the cross gorge through which the Missoula River cuts across the range, admire that finely chiseled peak we saw in the distance at Missoula, now rearing itself near at hand, and in delight gaze upon the old, old mountains, rough, craggy, timbered, and gorge-eaten.

Near Paradise the character of the valley is such that the significance of this name will be well understood. The mountains, bold, grim, and cut by lateral cañons, rise high above. Below there the valley narrows, the mountains crowd together in sheer, scarped faces, wild and irregular, with a talus of granulated fragments of rock. At Plains the valley again expands. This alternate contraction and expansion of mountain and valley continues. At some points the effects are very impressive.

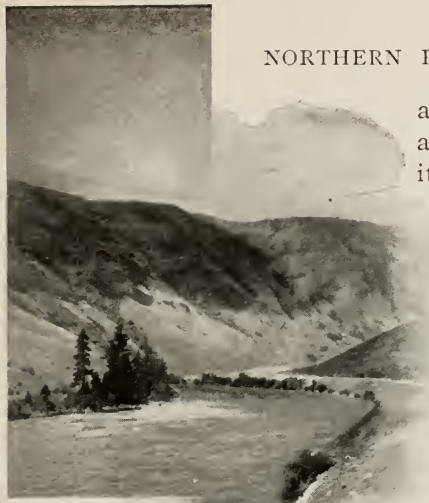
Thompson Falls is in the midst of scenes somewhat contradictory in character. The lofty heights again retreating, the valley resolves itself into alternate parklike spots and straggling patches of evergreen trees. The river, however, is a noisy, tumbling stream, finally plunging over the falls, which can for an instant be seen from the train, and afford a spectacle well worth seeing.

Near Heron, above Cabinet Gorge — which is a picturesque spot, and should on no account be passed unseen — on the side of the river farthest from the track, the range rises in long, timbered flanks surmounted by scalped crests, forming a fine view. At another place a remarkable exposure of rocks at the summit of the bluffs startlingly resembles the ruins of ancient castles.

HELL GATE CAÑON. LOOKING EAST.

Crossing the Idaho line, we soon skirt the shores of Lake Pend d'Oreille, one of the most beautiful lakes in the West.

It rests us. Mountains and river, river and mountains—we have seen them for long hours, and though we love them, have admired them, we rejoice to see the river lose itself and the mountains draw back, and in their places have this large, slumberous, hazy, beautiful lake, that soothes



YAKIMA CAÑON AND RIVER.

and throws about us a restful calm. For a time after leaving Hope, we skirt its shores and obtain fleeting, elusive glimpses of it, lethargic and lazy. Then our course takes us away from it across the Spokane plain.

Many miles southwestward from Spokane the valley of the Yakima River is reached. It is a river in a thirsty land. On each side of the valley the brown volcanic hills rise with no sign of a tree on them. The river itself is a clear, swift running stream, pleasant to gaze upon. It derives interest also from its value as an economical factor from an irrigation standpoint.

Between North Yakima and Ellensburg the river flows through the Yakima Cañon, and the railway follows the river. The cañon is cut through the lava, and it affords an interesting study for those who delight in volcanic geology. Beyond the cañon there is a wide expansion of the valley, known as Kittitas Valley. It is a large and beautiful meadow valley at the eastern base of the Cascades.

From Ellensburg the train continues alongside the Yakima River until well into the mountain range.

The Cascades are vastly different from the Rockies. The former are very heavily timbered and deeply gorged, and as the train climbs them the traveler gazes out upon a wilderness of peaks and ravines. Below, he peers into a wild, tangled chasm ; above, the mountains climb higher and higher. Mountain climbing among the Cascades means hard, hard work, as can be seen at a glance.

After the summit of the Cascades is passed, through the Stampede Tunnel, the road follows the windings of the Green River, a small but exceedingly picturesque trouting stream, until practically clear of the mountains.

About halfway between Tacoma and the Columbia River

LAKE PEND D'OREILLE, FROM HOPE, IDAHO.
Altitude, 2,062 feet.

the valley of the Cowlitz is entered. This stream is of glacial origin and has its sources in the glaciers on Mount Rainier. The railway follows it to the Columbia River. At Kalama the entire train is run on to a large ferryboat and transferred to the opposite side of the Columbia River, here wide and deep. The transfer requires about twenty minutes.

The valleys of the Columbia and Willamette are then followed to Portland.

In this 1,000 miles of travel along historic waterways, four of the largest rivers of this country are followed for greater or lesser distances, and of these four, three—the Mississippi, Missouri, and Columbia—are among the largest rivers of the continent.

A study of these streams would prove interesting, but that is foreign to the purposes of this chapter.

GA-SA-GOG-SQUA-JA-MAI-GOG SA-GA-AI-GAU — that is one way the Ojibway (Chippewa) puts it. We say, simply, Leech Lake. Our one-syllabled "Leech" becomes seven syllables in the Ojibway tongue.

That, however, is neither here nor there; it is the same lake in each case, the same large, shore-timbered, beautiful water, with the birch-bark canoes of the noble, untutored Ojibway Indian dancing over it in storm and calm. Untutored, did I write? Well, possibly so, but in at least a few instances we shall have to modify that, as we shall see farther along.

It is still pretty nearly a primeval wilderness about Leech Lake, as it was 100 years ago when the Ojibway and the Sioux—or the Dakotah—their bitter enemies, were each striving to annihilate the other. It is but recently that the logging camp and railway have invaded the region. Now the sport-loving man, from Chicago say, can, within twenty-four hours, transfer himself from his boxlike office, fifteen stories above the street, to a clean, cool, white tent, set up among the "murmuring pines and the hemlocks" near Walker, on the western arm of the lake. From turmoil to quiet, from city to country, from filthy dust to clean beach sand, from nervous strain to healthful relaxation, from business scheming to bass fishing—these are some of the changes that come to him who is wise enough to take time by the forelock, and repair the wastage of the nineteenth century wear and tear by going to Mother Nature for solace and cure.

Leech Lake is in Northern-Central Minnesota, is nearly 1,300 feet above sea level, and is a part of the Leech Lake Indian Reservation. It is the third largest lake in the State, exclusive of Lake of the Woods.

It is easily reached by the Northern

A Canoe Load of Indians.

1. An Indian Grave on Goose Island.
2. Summer Bark House.
3. A Day in the Woods.
4. The Rippled Waters.

Pacific and the Brainerd & Northern Minnesota railways, connection being made at Brainerd. Walker, the terminus of the latter railway, is a new and thriving town situated upon the lower part of the western arm of the lake. It is well supplied with hotels that make a specialty of catering to summer boarders and tourists. The Hotel Pameda is a new brick-veneered, electric-lighted, steam-heated hotel, thoroughly modern in its conveniences.

There are several steam craft on the lake which can be hired for picnics, special excursions, etc. Occasional trips are made by some of these steamers about the lake. There are also many small boats suitable for rowing and fishing to be found.

As is the case with most localities roamed by the Indian, there are many legends and traditions connected with the region. I give one relating to the name of the lake, as told by White Hair, an

Ojibway chief. At the time of the occurrence the Leech Lake country was in the possession of the Sioux Indians. An Ojibway Indian, traveling far from his own tepee, had penetrated this land of the Sioux and at length stepped from the forest upon the shore of the lake. Just then he saw an immense leech, — as large as an "Ah-pah-quah," a birch-bark covering for tepees — three or four feet wide, and so long that the entire leech could not be seen as it swam through the water. The Indian exclaimed, "Kah-sug-quah-je-may-caug!" — the place of the leech — and thus the lake derived its name. The similarity of this word with that at the beginning of the chapter will be noted.

TAKING IT EASY.

The lake is picturesquely irregular in its shore line, aggregating thus more than 500 miles. It is nearly forty miles in length and sixteen or seventeen miles wide, counting extremes.

The western arm of the lake is a good-sized body of water in itself. It is connected with the larger lake by a narrow channel. Along the northern shore of this channel are several settlements of Indians where they live in primitive conditions still. Their novel bark tepees, wigwams, or wikiups, as one chooses to call them, are in plain sight from the boat, and a stop can be made to visit them if one is so disposed.

A BIG ONE.

The main lake is indeed a fine body of water. There are three large islands, one of which, Bear Island, holds an encampment of Ojibways, thus far but little influenced by civilization. A favorite excursion from Walker is by steamer to Bear Island to see these aborigines.

The main lake extends northward in two large arms. Between them is a high, prominent point, with a graceful slope upon all sides to the water. Mah-shah-wah-see was an Indian traveler. In the eighteenth century he paddled his canoe up the Mississippi and Leech Lake rivers, on a journey from the Great Lakes to the Leech Lake country. When he reached the point mentioned he saw the tail of a plunging otter, and from that circumstance he named the point Otter Tail Point, and thus

it remains to the present day. Mah-shah-wah-see also named the islands: Goose Island, near Otter Tail Point, because the wild geese nested there; Pelican Island, from the number of shay-day-min-is (pelicans) he saw; Bear Island — Mah-ko-min-is — because many bears were found there.

One day I hired a steam launch and coasted about the lake. First we went up to the extremity of the western arm of the lake. Thence we steamed up a narrow winding river, mile after mile, between swamp lands, to an isolated, beautiful body of water —Steamboat Lake. On its shores we found another birch-bark tepee encampment of Indians. On the swamp lands along the river were scaffolds from two to five feet high, on which were cocks of hay cut from the swamps by the Indians, for sale to the lumbermen for winter forage for their horses.

HOTEL PAMEDA.

Returning, we threaded the narrow passage to the main lake, shot out across the water past Goose Island, and, rounding Otter Tail Point, landed to replenish our fuel supply.

An old Indian and his squaw slowly paddled by and we greeted each other in friendly fashion. Then we climbed to the top of the point. A large portion of it was bare, save for a large number of red sumach bushes and a little undergrowth of grass.

Tradition says that on this point was fought a long, bitter, and bloody battle between the Ojibways and the Sioux. From the blood-soaked ground sprang the sumach bushes, and to this day their flaming banners commemorate the awful carnage of that time.

An interesting trip is that from Walker to the Agency. There the improved Indian is seen. Two schools show kindergarten and regular school work equal to that found in the city schools. Comfortable log huts and stores replace the old-fashioned birch-bark structures. The Indians dress in civilized attire, attend a church presided over by an Indian Episcopalian rector, a man of high standing among Minnesota Episcopalians, and show redemption from barbarism.

Most astonishing of all things the Indian girls and women make fine laces. Miss Colby, their instructor from the East, has reason to be proud of the proficiency of her pupils. A short time before my visit they had forwarded to New York a quantity of lace which was sold for $6,000. A peculiar fact about the lacemaking is that almost all of it is made to fill special orders. Some of it may be found in the residences of New York's "400."

The Indian girls receive 10 cents an hour for their labor and learn the art in reasonably short time. They are kept constantly employed and make handkerchiefs, lace curtains, doilies, collars, dress fronts, etc. Miss Colby prepares the patterns and the girls grasp the meaning of them quickly.

The region about Leech Lake is almost a virgin fishing ground. Besides Leech Lake itself there are many other lakes hard by that abound with fish. Bass, pickerel, lake trout, perch, and muskallonge will afford abundant opportunity for the angler to enjoy himself. There are many muskallonge in Leech Lake, and the year 1897 saw some large specimens of this fish landed.

Woman Lake, southeast from Leech Lake, reached from Pine River, is also an attractive spot.

Both feathered and large game are found in this region during the season.

For the person who earnestly delights in an out-of-door life of a week or a month, this region, with its superb climate and health-giving atmosphere, its satisfactory accommodations, and hunting and fishing privileges, can not be too highly recommended.

1. Ducking—Hauling Them In.
2. The Old Man and His Squaw Afloat.

3. Lace-Makers at the Agency.
4. The Narrows.
5. The Agency from the Lake.

THE AGRICULTURAL NORTHWEST

WILLIAM H. SEWARD bids fair to go down in history as a prophet not without honor in his own country. His purchase of Alaska in 1867, and his faith in the future of that region and the ridicule which resulted therefrom, are fresh in the minds of many at the present day when Alaska is surprising the world by the richness of its varied resources. But in 1860 Seward made a prediction that has now generally faded from the recollection of mankind. It was made in the city of St. Paul, Minn., then a place of about 10,000 souls, while Minnesota had a population of less than 200,000. Now St. Paul numbers between 150,000 and 200,000 persons—as many as the State then contained—and those who count Minnesota as their home probably exceed 1,500,000. His prediction was based upon his travels in the Northwest and related to that section. In part it was as follows: "Here is the place, the central place, where the agriculture of the richest region of North America must pour out its tributes to the whole world." The quotation is the kernel of a rather lengthy address upon the subject indicated, and, made thirty-seven years ago, evinces a wonderful far-sightedness even in an astute statesman such as Seward was.

It is my purpose in this chapter to enlarge somewhat upon the development of the Northwest—which has even yet scarcely begun, and which is rapidly verifying Seward's prophecy.

The years of the fat kine have truly been followed by years of the lean kine, commercially speaking, but we seem at last to have reached and emerged from the trough of depression, and to have made some progress up the opposite side of the hill of prosperity. It seems to be one of the unwritten laws of trade, that after such periods of stagnation as that through which we have been passing, there comes a great

emigration from the congested cities to the open country. People flock from the city to the farm.

This movement has already begun and no section of the United States will derive more benefit from it and receive from the older-settled portions of our domain greater accessions to its population than will the broad Northwest, simply because no other portion of the land deserves more when once the Northwest is studied and understood. Between the banks of the Mississippi River and the shores of Lake Superior, and the waters of the Pacific Ocean are found a variety of climate, topography, elevation, temperature and soil found nowhere else in our country.

I shall divide the region mentioned into three zones. The first stretches from the Mississippi River and Lake Superior to the Missouri River; the second, from the Missouri River to the Cascade Range; the third includes the coast country west of the Cascade Mountains.

This division is by no means a refined one, but it will answer the purposes of this discussion.

In using the word "agricultural" in the heading of this chapter, I mean it in an elastic, wide sense, and wish it to include the pastoral occupation as well.

The story of the development of the Northwest is an interesting one, and it relates, substantially, to the period of time since 1870. Between Lake Superior and the Missouri River, north of the latitude of St. Paul, there were, practically, at that time, few settlements, and the Indians roamed at will. West of the Missouri River and extending to the barriers of the Rocky Mountains, the buffalo fed in countless herds, pursued by the red man for his winter's supply of furs and food.

AT DEERWOOD, MINN.

SERPENT LAKE, FROM THE ISLAND, DEERWOOD, MINN.

Among the Rockies were a few mining camps containing some thousands of population.

West of the Rocky Mountains and east of the Cascade Range was a region destitute of settlement, but on the shores of the Pacific in Oregon, and on Puget Sound in Washington, there were numerous settlements of hardy pioneers enjoying existence where the balmy breezes and fecund soil of the coast made life worth the living.

The Northern Pacific Railway Company began construction in 1870, and a comparison showing the population of this region then and now will be instructive.

The population given for North Dakota for 1870 includes, of course, that for South Dakota, as both were at that time embraced under one territorial government, Dakota. Figures given are in round numbers only:

STATE.	Population, 1870, per 9th Census.	Population, 1890, per 11th Census.	Population, 1898, Approximate.
Minnesota	440,000	1,302,000	1,500,000
North Dakota	14,000	183,000	225,000
Montana	20,000	132,000	175,000
Idaho	15,000	84,000	100,000
Washington	24,000	349,000	450,000
Oregon	91,000	314,000	375,000
Total	604,000	2,364,000	2,825,000

It will thus be seen that the country had really to be penetrated by the railway before humanity went up to possess the land and before there was any business there for the railway itself.

No. 1 hard wheat, which now cuts such a figure in the world's food supply, was then unknown.

New lands and new soil, like new acquaintances, require time and trials before they are understood and known. It was so with this region. The whole country was decried, but as settlers gradually arrived, became conversant with the problems involved and successfully mastered them, a change took place. When it became known, for instance, that the Red River Valley could produce the finest wheat in the world, that fact settled at once and conclusively the question as to whether that immense area would ever teem with a numerous population. When later it became evident that Eastern Montana was fitted for successful stock-raising, ranchmen gradually settled along the protected streams, and their flocks and herds became visible on the hills and plains.

THE EASTERN ZONE.

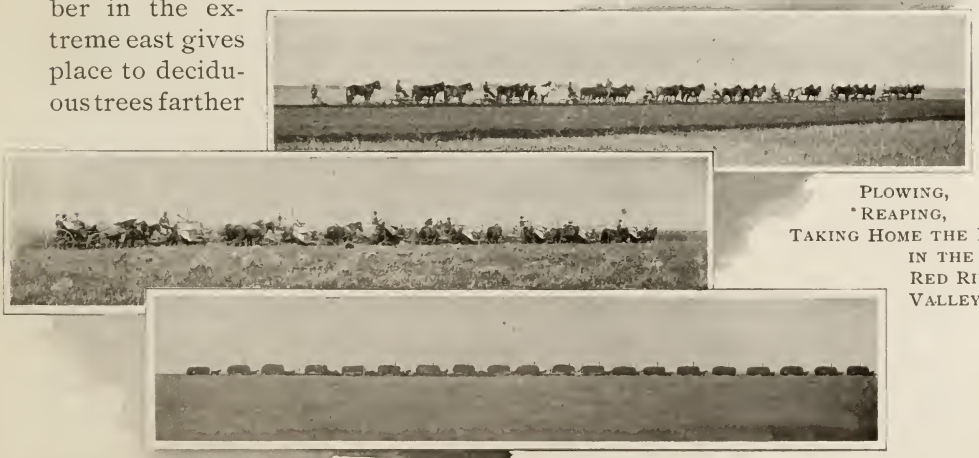
What I have denominated the eastern zone — as indeed, is true of each of the zones mentioned — is a region of much variety as regards lands,

elevation, etc. The one thing which may be noted as a constant here is the fact that the rainfall is sufficient to mature crops.

The eastern portion of this section includes the lands in Minnesota, and they lie almost wholly in the beautiful Park Region. The country is well settled, has numerous towns that are progressive and growing, and is convenient to good markets.

THRESHING SCENE NEAR GRAFTON.

Aitkin, Staples, Wadena, Perham, Detroit, Brainerd, Lake Park, Glyndon, and Moorhead are centers of population, some of them being noted as summer resorts and for fishing and hunting. The lands in this region are all good, varying somewhat in quality, and lakes and streams sparkle over the broad expanse like diamonds on the floor of a jeweler's window. The country owes its form and character to glacial action, is decidedly rolling, and is well, in many places densely, timbered. Pine timber in the extreme east gives place to deciduous trees farther



PLOWING, REAPING, TAKING HOME THE HAY, IN THE RED RIVER VALLEY.

RED RIVER VALLEY FARM HOME IN 1895.

SAME IN 1885.

west. The soils are rich and well drained. The lands in the vicinity of Aitkin and Deerwood are specially suited to small fruits and market gardening. Scattered bunches of timber afford protection from winds, and the settler has a choice of markets between Duluth and Superior on the one hand and St. Paul and Minneapolis on the other. The expansion of the iron mining industry on the Mesabi and Vermillion ranges north of Duluth and Superior, and in the Gogebic region east of Ashland, Wis.— the easternmost point reached by the Northern Pacific — enlarge the markets for these particular productions. The timber camps in the Wisconsin and Minnesota pineries north of the line of the Northern Pacific also afford a market for vegetables, fruits, flour, oats, forage, butter, eggs, etc. Logging and other railways push northward from strategic points into these great forests.

Pushing westward from Duluth the elevation gradually increases, Brainerd being about 1,200 feet above the level of the sea, and Detroit, near the rim which divides the Park Region from the Red River Valley, being nearly 1,400 feet above sea level. This entire region is emphatically a garden spot. In proportion to the changes in soil it is better adapted to the cultivation of certain products. Wheat, oats, corn, potatoes, the grasses, etc., are common to every portion of it. As we progress westward we find the dairying interest increases in importance. The same is true of stock-raising in general. The recent high standard obtained in London, England, by Minnesota butter in competition with that article from all parts of the world, shows what can be done by the thorough and intelligent Minnesota farmer and dairyman. The splendid grasses, the pure water of the lakes, and the bracing, non-malarial atmosphere are prime elements in this.

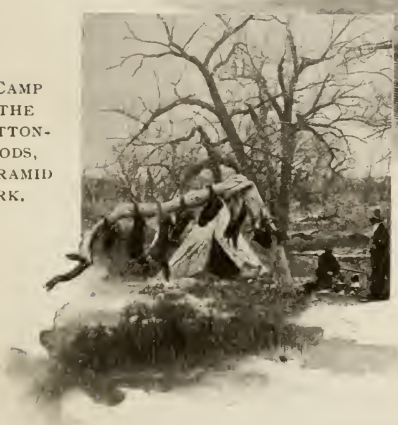
The recent establishment of Swift & Co., the packers, at South St. Paul, indicates the value placed by experts upon the quality and quantity of beef, mutton, and pork that is being and will be raised in the Northwest.

The majority of lakes in Minnesota are well stocked with fish. Bass of several varieties, pike, pickerel, white fish, muskallonge, and perch predominate. Prairie chickens, geese, ducks, pheasants, etc., are usually plentiful in this region during the season, and moose and deer are found in the depths of the forests. The State laws regarding the protection of game are very stringent and are rigorously enforced.

Leaving the Lake Park Region with its beautiful lakes, rolling hills, and fertile fields, one is borne in swiftly rolling car over a country far different in appearance. Farther than the eye can see, stretch vast, scarcely undulating plains. In early summer they are clothed in vivid green; in early fall, robed in golden yellow; in late autumn, a vast checkerboard of black and green and brown — plowed fields, green swales, the stubble of harvest. It is the famed Red River Valley. It is as flat as the Park Region is rolling. It is an empire in itself. Year after year it produces those enormous crops of hard wheat which, from the elevators in Duluth and Superior, are sent forth in mammoth ships to supply the world with bread.

ON THE TRAIL HOMEWARD BOUND.

PYRAMID PARK (BAD LANDS, SHOWING "BALANCED ROCK" IN CENTER OF VIEW IN DISTANCE.



A CAMP IN THE COTTONWOODS, PYRAMID PARK.

The rise and progress of this valley, from the standpoint of civilization, borders on the romantic.

When the iron horse first broke the silence of its solitudes it was a buffalo feeding and Indian hunting ground. Traffic between the frontier towns from St. Paul to Winnipeg, or Fort Garry, in Manitoba, was carried on in a peculiar two-wheeled cart, of

which there were thousands in use. The old cart and buffalo trails are now succeeded by steel trails. The valley is supplied with rail and telegraph lines, both lengthwise and crosswise.

The valley is quite uniform in character and the Red River flows, approximately, through the center northward to Lake Winnipeg. The river being the divisional line between Minnesota and North Dakota, it follows that the valley lies about equally in the two States.

On account of the great adaptability of the soil for wheat-raising, this cereal has for years been the staple crop. But a change is in progress. Diversified farming is increasingly practiced. Stock-raising and dairying are becoming important departments of the larger and better farms. The valley is not timbered except immediately along the streams, and this lack is being partially supplied by planted groves, which serve also the purpose of wind-breaks.

RAILWAY STATION, MILES CITY, MONT.

It has been popularly supposed that the so-called "corn belt" found its northern limit at about the Iowa-Minnesota State line. It now seems as if there might not be any northern limit. It is fairly possible that by careful selection and cultivation this grain may gradually become so acclimatized as to admit of the indefinite extension of its line of north latitude. In this connection a table showing the production of wheat and corn in Minnesota and North Dakota for 1870, 1890, and 1897 may prove instructive:

STATE.	WHEAT—BUSHELS.			CORN—BUSHELS.		
	1870 9th Census.	1890 11th Census.	1897 Approximate	1870 9th Census.	1890 11th Census.	1897 Approximate
Minnesota	18,800,000	52,300,000	59,900,000	4,700,000	24,700,000	25,800,000
N. Dakota	170,000	26,403,000	28,350,000	133,000	178,000	426,000
S. Dakota	.....	16,541,000	.....	.....	13,152,000	.....

It should be remarked that the figures for 1870 as applied to North Dakota include also what is now South Dakota, and the probabilities are that nearly if not quite all the yield of both wheat and corn for that year came from that portion of what was then Dakota. The acreage of corn in Minnesota and North Dakota is increasing yearly, and it is also expanding latitudinally. *Pari passu* the live-stock industry also grows.

BIG HORN TUNNEL, YELLOWSTONE VALLEY, MONT.

1. Bozeman, Mont.

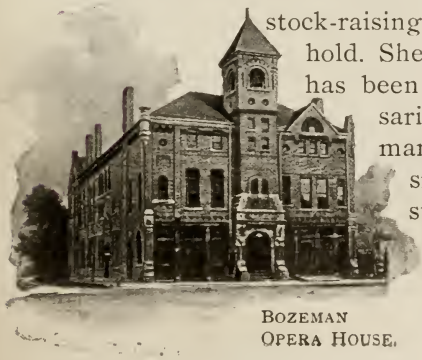
2. Threshing Scene near Bozeman.

3. Main St., Bozeman.

The successful cultivation of corn in this region, and its rapid increase, speak more forcibly than can words of the tremendous possibilities of this region. The Dent and Flint varieties of corn do as well here as in the East and South. They adapt themselves to the cool climate and short seasons and usually are fully matured before frost comes, or else become so hardy that they simply ignore Jack Frost's presence. It may here be stated that the Ojibway Indians have cultivated corn for 100 years on the shores of Red Lake, Minn., in the 48th parallel of north latitude.

West of the Red River Valley are the Sheyenne and James River valleys, flowing for the most part from north to south, parallel to each other. The country traversed by these streams is an undulating one, well drained and splendidly suited to diversified farming. As we proceed westward from the Red River Valley we find that stock-raising has taken a firm foothold. Sheep-raising particularly has been taken up, not necessarily in large flocks, but many farmers have from six to one hundred, and from these are able to supply their own needs for domestic yarns, clothing, etc. A woolen mill at Grand Forks runs day and night on domestic work, and

Spire Rock in Bridger Cañon, near Bozeman.



Bozeman Opera House.

has been so successful that other mills are projected. Westward still to the Missouri River lies the Coteau country. This section is hilly prairie, with few streams but many depressions filled with ponds and lakes. It covers an area of, say, 300 miles from north to south by from 30 to 45 miles in width. This is preëminently a sheep and cattle country, but in most of the depressions abundant crops can be grown.

The Coteau country is of course more sparsely settled than that to the eastward, but as the stock-growing industry increases, this part of North Dakota will advance.

THE GREEN MOUNTAIN MINE, BUTTE, MONT.

In the James River Valley small fruits grow to perfection, and celery culture has well established itself in and around Jamestown. In the northern part of the valley the German Baptists, or Dunkards, from Ohio, Indiana, Pennsylvania, etc., have planted colonies and are prospering. One of the sisters who recently moved there expressed the general sentiment regarding the country thus: "It seems a sin that there should be such a grand country and we not know anything about it." The Mennonites also have flourishing settlements in the State.

The regions mentioned are cut in twain by the Northern Pacific. Upon each side of the road the land stretches in great, motionless waves into Iowa and South Dakota on the south and to Manitoba on the north. Throughout their length and breadth the steel rails glisten, and cities, towns, and hamlets dot the landscape. Some of these have been mentioned. Others are Minneapolis, the great city of flouring and lumber mills; Anoka, St. Cloud, and Little Falls on the main line in the Mississippi Valley; Clitheral, Battle Lake, Fergus Falls, Breckenridge, and Wahpeton on a branch line from Wadena which taps the Park Region to the south of the main line; Casselton, Valley City, Jamestown, and Bismarck on the main route west of Fargo, the latter the most important place in the southern Red River Valley. The main line of the Northern Pacific begins at St. Paul, the capital of Minnesota, and the company's through trains start from that point. Connection is made at Staples with trains to and from the head of the Great Lakes. Just west of Detroit, at Winnipeg Junction, the Manitoba branch diverges, passing through Crookston, Grand Forks, Grafton, Drayton, and Pembina, to Winnipeg, the capital of Manitoba, and traversing the Red River Valley. From Fargo a

branch line taps the Sheyenne and James River valleys southward transversely, and at Jamestown the valley of the James is longitudinally opened by branch lines both north and south. It will, therefore, be seen that ample transportation facilities exist in the so-called eastern zone, especially as two or three other, but shorter, feeder lines leave the main line at Little Falls, Sanborn, and La Moure.

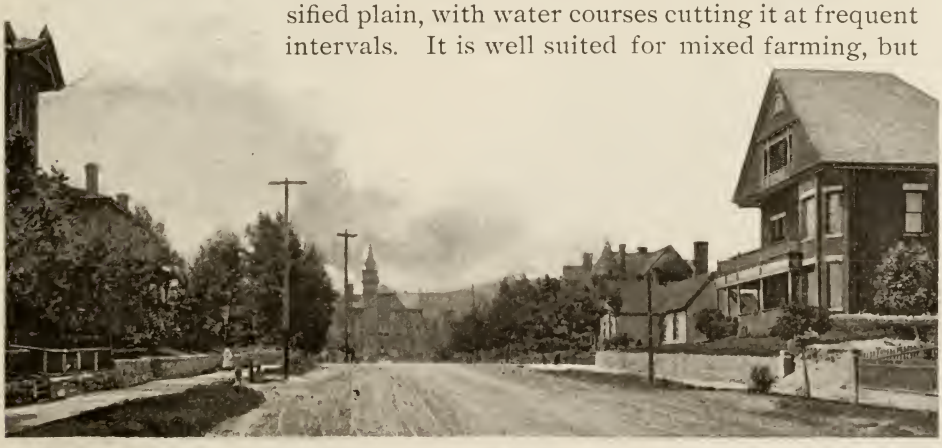
LIBRARY BUILDING, HELENA, MONT.

THE MIDDLE ZONE.

In adopting the Missouri River as the line between the eastern and middle zones, based upon the lack of rainfall west of the river, I did so somewhat arbitrarily and for convenience sake. As a matter of fact there is but slight difference in this respect between the western portion of the eastern zone and the eastern part of the middle zone. The counties that border the Missouri River on the west have sufficient rainfall to mature crops without irrigation except in a year of excessive dryness, such as comes impartially to all portions of our country at times. It is not until we reach the higher plateau country at Dickinson and beyond that the deficiency of precipitation becomes specially noticeable.

This zone, extending from the Missouri River to the Cascade Range, covers a wide scope of country, including large and important valleys, wide plains, prodigious mountains. It embraces also a wide range in climate, and, naturally, some minor differences in rainfall. As a general proposition, however, successful agriculture within this area is dependent upon irrigation.

Immediately west of the Missouri River the country is a rolling, diversified plain, with water courses cutting it at frequent intervals. It is well suited for mixed farming, but



IN HELENA, MONT.

In the Bitter Root Range.

1. Coquina Lake.
2. Where the Trout Hide.
3. On the Trail.
4. Mary Stuart Falls, East Fork Moose Creek.

Trouting near Missoula.

will undoubtedly become more and more noted as a grazing country. This is true of the entire region west to the Yellowstone Valley. West of the river, also, the temperature ranges a little higher than to the east, and spring and summer come a little earlier. This brings us to a peculiarity of the Northwestern climate apparently at variance with nature.

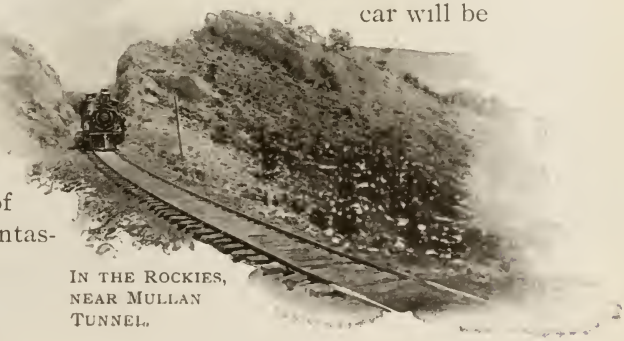
In the Northwest one hears much of the "Chinook winds," or the "Chinook." Flowing across the Pacific Ocean from the shores of Japan is a warm ocean current, the Kuro Siwo, comparable to the Gulf Stream of the Atlantic Ocean. This flows northeasterly from Japan to the Aleutian Islands, Alaska, is deflected to the southeast and south and strikes the Pacific Coast near the mouth of the Columbia River, whence, after a southerly course, it again flows out into the ocean. This stream ameliorates what would otherwise be a harsh climate. The North Pacific Coast climate is very warm and moist and the winds from the warm water of the ocean that rise above the Cascades and project themselves inland, modify and temper the otherwise terribly frigid climate of Washington, Idaho, Montana, and North Dakota. As the Chinook's breath reaches eastward it of course gradually loses its warmth, and its effects are probably not much felt east of the region between Bismarck and Jamestown.

Thus, as one progresses westward from North Dakota, he experiences increasingly the warmth-giving properties of the Chinook. I myself have gone to bed at night in Missoula, Mont., when the mountains were white with snow, and upon rising in the morning have found them brown as in autumn — the work of a Chinook during the night.

Leaving this rolling country of North Dakota we descend into one of the strangest, most weird spots found within the United States.

In the old days the French *voyageurs* called it *Mauvaises terres pour traverser*, meaning, "bad lands to travel through." This meaning became perverted, and it has been called, for convenience' sake, the "Bad Lands."

This section is now known as Pyramid Park. This is because of the remarkable resemblances to architectural and other figures found there. The scene at times baffles description. First, on one side of the car will be revealed a picture of what appears to be the ruins of an old castle far away on the horizon; the next instant there will burst into view on the other side a grotesque medley of rock-forms resembling animals, fantas-



IN THE ROCKIES, NEAR MULLAN TUNNEL.

tic figures, and what not. So realistic are some of these that names have been applied to many of the objects. One who has never seen them can really form any idea of the multiform effects and the delicate carving produced by rain-sculpture, as it is called. We are hemmed in and almost overwhelmed by an endless array of parti-colored hills and bluffs of such strange appearance and configuration, that one is tempted to believe that by digging, the remains of an ancient civilization might easily be uncovered.

The field is one in which the imagination has unlimited opportunity to exercise itself, to the great delight of its possessor.

But it is not a land of painted cliffs and buttes alone. All in all it is perhaps the best stock range in the West. The hills, bluffs, and plateaus are covered with a peculiar blue grass that is very nutritious. The many ravines and abrupt banks afford splendid protection from storms, and along the few streams there are groves of cottonwoods, suitable for cabins, fencing, and fuel. This region extends well across the Montana line and hundreds of thousands of cattle range over it.

Another feature of this country ought now be referred to. A wide area extending west from the Missouri River and across the Pyramid Park or Bad Lands region is underlaid with lignite coal. It is of good quality, and is rapidly coming into general use among the farmers for fuel. It is to a certain extent the burning of some of these beds that gives to Pyramid Park its peculiar figures and rich coloring. This coal is found in veins from four to twenty feet thick, is easily mined and is cheap. It is sold at railway stations at from $2 to $4 per ton. While, of course, inferior to bituminous coal, it is good for domestic uses and fills a want in a country which is practically treeless. Lignite is mined at many points for commercial use, and a great many settlers have mines on their own premises, where a little work with pick and shovel procures a wagon load of it. Lignite — wood coal — is wood just changing to coal, in the first stages of conversion, and still retains the woody texture and appearance.

As the train winds westward from Mandan, on the west

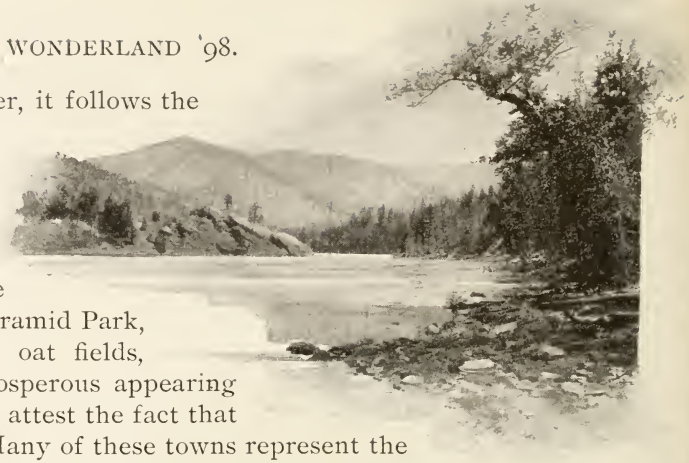
1. Irrigated Ranch in Hellgate Cañon.

2. Cattle Herd, Yellowstone Valley.

LIEUT. MOSS' BICYCLE CORPS OF COLORED TROOPS, U. S. A. OF FT. MISSOULA.

1. BICYCLE CORPS IN ALIGNMENT.
2. BICYCLE CORPS STARTING FOR ST. LOUIS.
3. ON THE MARCH.

4. A MONTANA NURSERY.
5. DAIRYING ON THE BLACK FOOT.

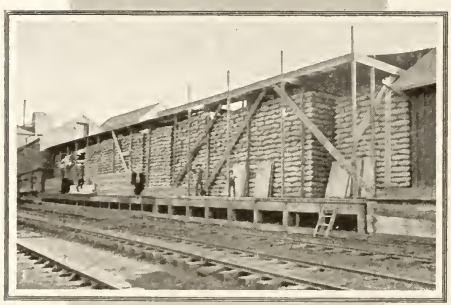


Missoula River, Mont.

bank of the Missouri River, it follows the Heart River for a considerable distance and then winds across the elevated country to beyond Dickinson, where the descent to Medora on the Little Missouri in the heart of Pyramid Park, begins. Wheat, corn, and oat fields, vegetable gardens, and prosperous appearing towns at frequent intervals attest the fact that settlers are moving in. Many of these towns represent the colonization idea, having been established by colonists, some from the States, others from Russia.

After the Pyramid Park country is left behind the railroad crosses an elevated plateau grazed by cattle, and then follows the windings of Glendive Creek to the town of Glendive on the Yellowstone River.

From Glendive the railway follows the Yellowstone River, one of the mightiest streams of the West, 341 miles to Livingston. This valley is a trough or big furrow plowed by the stream through an upland plain that forms the eastern part of Montana. It has just begun to play the part that God intended it should in the agricultural economy of the Northwest. Twenty-five years hence the Yellowstone Valley will support a large population, and the waters of the great river that now run idly to the sea will be irrigating hundreds of thousands of acres of land and turning machinery in flouring mills. On each side of the valley the country is a great cattle and sheep range. Montana cattle and Montana wool are sought after in the eastern markets. When this valley shall have been placed in large part under irrigation, a new era will have come to stock-raising. 'Tis true that crop-raising will be largely increased, but

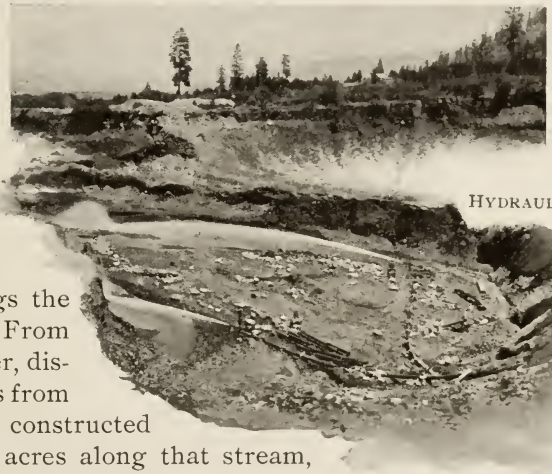


1. Wheat Piled for Shipment near Moscow, Idaho.
2. Threshing Outfit near Moscow, Idaho.

more than this will come of it. Thousands, perhaps millions of tons of alfalfa, the forage crop *par excellence*, will be raised and the vast herds that now graze the plains the year round will then be brought into the valley in the fall and winter and fattened upon alfalfa. This particular species of forage is destined to play a very important part in the future development of the arid and semi-arid portions of the Northwest. It grows luxuriantly, requires little attention, can be cut from two to six times a season, therefore yields heavily, retains well its freshness after cutting, and its nutritious and fattening qualities are very great. Alfalfa will also fatten hogs, is good for dairy cows, and bees make the best of honey from its blossoms. In a word it makes a wonderful all-around crop. It is only within seven or eight years that alfalfa was introduced into Montana.

AIR COMPRESSOR, STANDARD MINE, BETWEEN BURKE AND GEM, IDAHO.

While the Yellowstone Valley is as yet sparsely settled, there are a number of thriving towns that serve as supply centers and shipping depots for stock and wool interests. Including Glendive, already mentioned, Miles City, Billings, Big Timber, and Livingston are the larger towns.



HYDRAULIC MINING.

At Miles City and Billings the results of irrigation are seen. From a point up the Tongue River, distant some ten or twelve miles from its mouth, a canal has been constructed which irrigates some 25,000 acres along that stream, and, near its mouth, along the Yellowstone, below Miles City. The ranches, market gardens, and small fruit farms supplied with water by this canal show the value of irrigation thereabout.

Billings, nearly 150 miles farther up the valley, boasts of irrigated fields on a still larger scale. There one will find from thirty to fifty miles of the valley under irrigation. The county of which Billings is the county seat has some 300 miles or more of irrigation canals. Other large irrigation enterprises are in prospect, some of them particularly under the

SPOKANE, WASH.

sponsorship of the General Government and the State of Montana. In this section of Montana there are valuable coal deposits. Southwest from Billings, on the Rocky Fork of the Yellowstone at Red Lodge, bituminous coal is mined. The coal used on the locomotives of the Northern Pacific Railway in Eastern Montana comes from these mines. At Horr, on the Yellowstone Park branch, good coking coal is mined. At other points in the mountains in this region mines have been opened and shipments of coal are constantly being made.

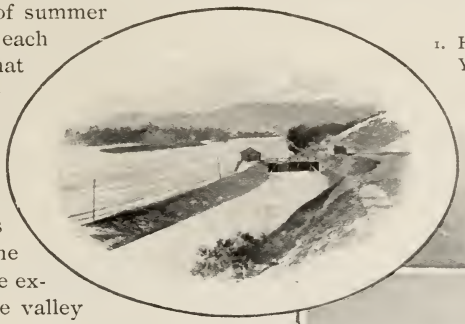
N. P. RY. STATION, SPOKANE.

Leaving Livingston and the valley of the Yellowstone, the first crossing of the Rocky Mountains is made, and what is probably the most noted valley of Montana, at the present time, lies before us. This is the Gallatin Valley, of which Bozeman, the seat of the Montana Experiment Station and a place of 4,000 population, is the chief town. This valley was formerly a vast lake, which accounts for its great fertility. They have no crop failures there — irrigation prevents that. The valley is surrounded by mountains which provide an unfailing supply of water. It contains, including both valley and bench lands, about 1,000 square miles. The valley is apparently level, but it really slopes to the north, the fall being about sixty feet to the mile.

Gallatin Valley barley is noted the world over. In 1896 one firm at Bozeman shipped 14,000,000 pounds of barley to Europe. Alfalfa grows luxuriantly. In several instances three cuttings per season have averaged three tons per acre per cutting, or nine tons per acre per season.

Prof. S. M. Emery, director of the Experiment Station, in an article published in the October number of the *Montana Fruit Grower*, makes the following interesting statement:

Within ten years the valuable discovery has been made that much of the bench land does not require irrigation for crop production; the precipitation of moisture in the vicinity of the mountain ranges is much greater than at a distance of a few miles, and under the system of summer fallowing as often as each third year, it is found that winter grains can be grown most successfully without irrigation. This has materially increased the area of agricultural lands within the county, as the bench land area is more extensive than that of the valley proper.



1. Head Gate of a Yakima Valley Canal.

2. Ten-acre Potato Field in the Yakima Valley, Washington.

3. Yakima Valley, two miles southwest of N. Yakima.

Figures, personally compiled from crop statistic reports, obtained by correspondence with each farmer of Gallatin County for the years 1893, 1894, and 1895, show the average yield for three years to have been as follows:

	Bushels per acre.
Spring wheat	33.5
Winter wheat	37.9
Oats	58.1
Barley	46.3

These, by comparison with the average crops of

the United States, are remarkable; but upon the plats of the Montana Experiment Station, located at Bozeman, Gallatin County, under intensive cultivation and without the use of fertilizers, the average yield of grain for 1894 was as follows:

Spring wheat	41	bushels per acre.
Oats	82	" " "
Barley	52	" " "

The station farm is much inferior in quality of soil to the average Gallatin farm, and it is fair to assume that with a subdivision of our large farms and the better farming practiced in Eastern States, the average of the general crop in the county could be made to exceed that of the station farm here noted.

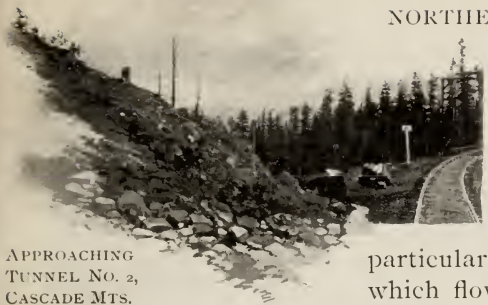
The great success here achieved in the culture of the grasses, clovers, and root crops, together with the short winter season, make of Gallatin County an ideal location for dairying, swine and cattle raising, and mixed husbandry in general. Fuel is cheap, coal of good quality is extensively mined in the county, selling at the mines for $2 per ton; pine and fir wood, green or dry, can be bought in the mountains, ready to load on to the wagon, for $1 per cord. Fencing material, poles and posts are abundant, and to be had on the public domain for cutting and hauling.

AN IDEAL FARM HOME, WASHINGTON

There are two routes from the Gallatin Valley, both across the mountains, westward. The main line of railway follows the Missouri River — the headwaters — northward to Helena, the capital of the State, thence crossing the Rockies again, follows a series of streams, of which the Hellgate is the principal one, to Missoula, at the foot of the Bitter Root Valley. The other route crosses the mountains to Butte, the greatest silver camp of the world, thence follows the valley of the Deer Lodge River to Garrison, where the main line is reached. The scenery by either route is fine, particularly so when crossing the mountains and when riding through the Hellgate Cañon. Helena and Butte are both interesting cities, very unlike, and can each be seen to advantage from the train. Via the Helena route the summit of the Rockies is crossed through the Mullan Tunnel, 3,850 feet in length.

The Hellgate Cañon and valley is well settled by ranchmen.

Missoula is situated at the foot of one of the grandest valleys in the West — the Bitter Root. The valley is the old camping ground, the home



APPROACHING TUNNEL NO. 2, CASCADE MTS.

of the Selish, or so-called Flathead Indians. It lies along the eastern slope of the Bitter Root Mountains, being protected by the range from chilling western blasts. A large number of small streams course from out the mountains, across the western side particularly, debouching into the Bitter Root River, which flows longitudinally through the valley to the north. These various streams render irrigation easy and comparatively inexpensive. The western part of the valley slopes rapidly to the river, and from its protected nature is especially adapted to fruit-raising. With the climate, elevation, etc., found here, it is not improbable that this valley will eventually produce the finest winter apples to be found in the West. The eastern side is a little less sloping and is better adapted to grain and grasses than to fruits.

After the junction of the Hellgate and Bitter Root rivers the stream is known as the Missoula River. It flows northwestward for many miles through the mountains, and finally cuts squarely across the range and joins the Pend d'Oreille River near Paradise. The stream then again changes name to Clark Fork of the Columbia.

The valley of the Missoula is one of marked fertility and also of rare scenic beauty. The junction of the Bitter Root and Hellgate valleys is a large, wide, level plain surrounded by mountains. North of Missoula, among the mountains, are small and beautiful valleys of not too great elevation to permit success-

COMMENCEMENT BAY, TACOMA, WASH.

TACOMA HARBOR AND SOUND.

TACOMA, WASH.

ful cultivation of fruits, etc. Throughout this locality much experimental work has been done in horticulture. The results are seen in large nurseries that will supply the State with a native stock of hardy, acclimatized trees, and in a rapid increase of orchard planting in the valleys. The upper part of the Missoula River Valley is well suited to grain, and heavy crops of cereals are raised there. This valley is well timbered also with coniferous trees. Along the lower valley the mountains contain minerals and the mining interests are growing in importance.

Logging on Puget Sound.

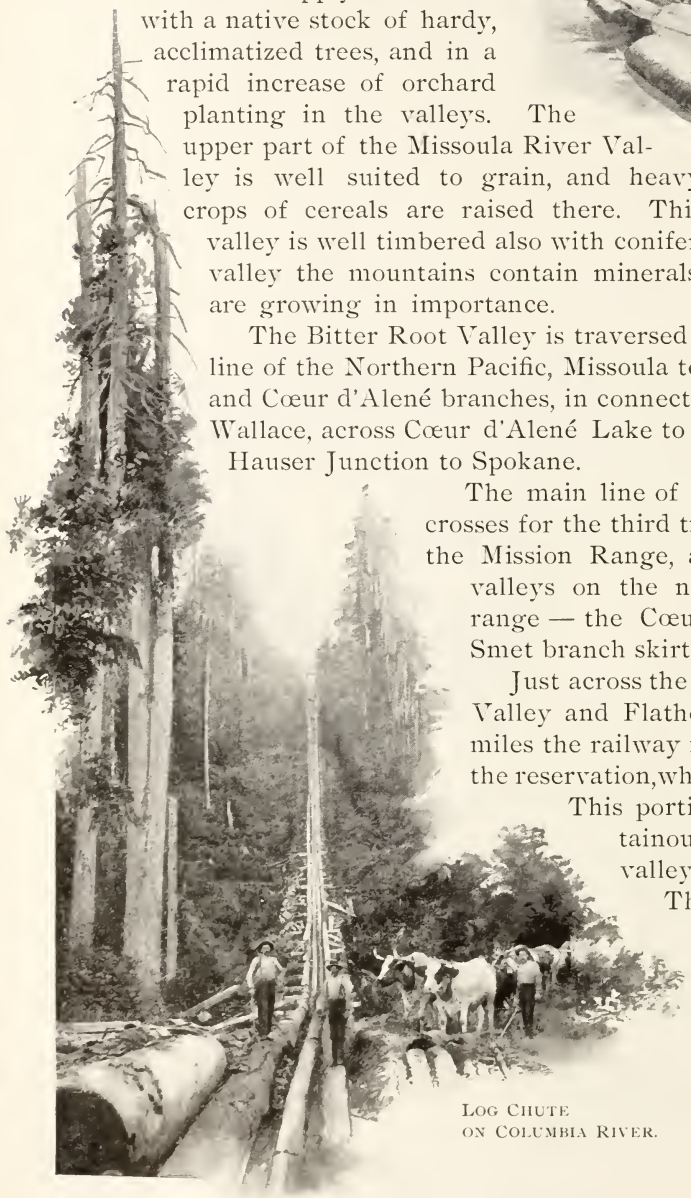
The Bitter Root Valley is traversed for fifty miles by a branch line of the Northern Pacific, Missoula to Grantsdale. The De Smet and Cœur d'Alené branches, in connection, extend from Missoula to Wallace, across Cœur d'Alené Lake to Cœur d'Alené City and via Hauser Junction to Spokane.

The main line of railway, west from Missoula, crosses for the third time an arm of the Rockies, the Mission Range, and then follows a chain of valleys on the north side of the mountain range — the Cœur d'Alené — which the De Smet branch skirts on the south side.

Just across the Mission Range are the Jocko Valley and Flathead Reservation. For some miles the railway follows the southern line of the reservation, which stretches far to the north.

This portion of Montana is a mountainous one, with the usual inclosed valleys of such regions.

The Clark Fork Valley, the longest and most important one, which the railway follows west from the Mission Range, is of about an average elevation of 2,000 feet above the sea level and



Log Chute on Columbia River.

very fertile. The mountain slopes are heavily timbered and many streams flow into the river from the gorges leading back into the depths of the ranges. At a few places there is little cultivable land; at some points there are wide areas.

The valley is gradually becoming populated and the towns bear evidences of prosperity.

For the lover of fine scenery there is a large supply of the article.

Spokane is the central point of an agricultural empire. It is really hard, even for one who has traveled much over this immediate region, to conceive of its future grandeur. Its possibilities are scarcely computable. This empire extends upon all sides of Spokane. Northward, lies the beautiful Colville Valley, agriculturally of much value, and flanked upon each side by mineral wealth beyond estimation. Still northward is the Kootenai country, poor in cultivable land, vastly rich in precious metals. The Spokane Falls & Northern Railway to Rossland and Nelson opens an extended market for the country southward. West of Spokane is the Big Bend region, cut by railways that afford outlets for the products of its fields. The Big Bend is a peculiar country, and portions of it, owing to peculiar conditions, will be slowly settled. Fruit, vegetables, and grain grow well, and the climate is mild and warm. The soil, like so much of that in Washington, is decomposed volcanic ash, very rich and easily cultivated. Many prosperous towns are found and there is a good deal of Government land yet unsold.

CENTRAL SCHOOL, SEATTLE.

It is, however, to the south of Spokane that the pride of Eastern Washington lies. This is the country known in a general way as the Palouse, Lewiston, and Walla Walla countries. These names cover the greater part of the region south of Spokane, east of the Northern Pacific Railway and extending over into Idaho.

This section is well settled, rejoices in a delightful climate, is well supplied with railway facilities, and finds in Idaho many mining camp markets right at its doors. A peculiarity of this region is that over large portions of it irrigation is unnecessary, and over other wide areas it is necessary. There are two causes for this. The warm winds from the Pacific impinge upon the Cascade Range and, rising above them, flow across the intervening country between the Cascades and the Bitter Root and Cœur d'Alené mountains, where, opposed by these ranges, they precipitate their moisture upon the region contiguous to Spokane. The Columbia and Snake rivers form a funnel, so to speak,

through which the moisture-laden winds from the ocean also pour and spread out over this region, furnishing the necessary moisture for crops. This condition of affairs is more or less modified in particular localities by elevation, peculiar location, etc., that give rise to apparently contradictory conditions, whereby irrigated farms and non-irrigated lands are found in proximity.

This region is a rolling one, with little timber except along the streams and on the high foothills and mountain slopes. Every foot of ground is productive. The top of a hill will produce as fine fruit trees or as good wheat or potatoes as will the land at its base.

The country tapped by the Palouse branch of the Northern Pacific is divided locally into several subdivisions. These comprise the Potlatch, the Palouse proper, the Snake River, and the Clearwater regions, which take their names from the principal streams which drain them.

This portion of Washington has been largely devoted to cereal production. During the summer and fall there is no rain, and grain crops may be harvested and then cared for at leisure, protection from the weather being unnecessary. It is a common sight to see alongside the railway tracks, thousands of bushels of wheat in sacks piled high in the air, and with no protection whatever given, or the covering merely a sort of a large, portable, rough shed. Within recent years fruit-raising has advanced rapidly. As an instance, the prune crop for 1897 around Juliaetta, Idaho, was enormous, 3,000 acres producing 250,000 pounds of prunes of many varieties. Thousands of acres of orchards in Washington and Idaho are just becoming productive, with the result that prune shipments increased 50 per cent, apricot shipments 25 per cent, and apple shipments 50 per cent over previous years. The East reaps the benefit of this great addition to the fruit output. Spokane is the distributing point for it, and during the season the Northern Pacific ran daily fast fruit-trains composed of from 10 to 25 refrigerator cars, destined for points east of Spokane. Some of these cars were dropped at points in Montana and North Dakota, many of them were for the Minneapolis and St. Paul markets, and the others went through by fast freight to Chicago, Cleveland, Buffalo, New York, and Boston. This fruit came from the Willamette Valley, Oregon, and the Snake River or Lewiston country principally. During the season of 1897 at least 100 car loads of fine apples were shipped east from the country between Spokane, Genessee, and Kendrick — in the Palouse region — alone. The recently ceded lands of the Nez Percé Indian Reservation east of Lewiston have attracted many immigrants. It is stated that there were raised in 1897, 300,000 bushels of wheat on these reservation lands.

West from Spokane and beyond the Columbia River in Central Washington, lies the finest irrigation proposition in the West. This is the

region drained by the Yakima River and its tributaries. This is one of the two large valleys in the West where Government reports state that there is ample water for irrigation enterprises. The soil is a decomposed volcanic ash, very deep, of a gray or dun color, and is inexhaustible.

The climate in general resembles California. The winters are short and mild, autumn weather continuing until Christmas, with fresh, bright, warm days, and spring opening in February — the very finest climate for people with rheumatism, and for consumptives. The mildness of the winter, which permits delicate children to play in the open air in midwinter, is a great security against disease, the daily advantages of open-air exercise being so conducive to perfect health. Cyclones or severe storms accompanied by thunder and lightning are unknown. If snow ever falls it soon disappears, as if by magic, under the warm breath of the Chinook wind.

WIND MOUNTAIN, COLUMBIA RIVER.

The total rainfall in the Yakima Valley is about thirteen inches per year. While the summers are consequently long and hot, the dryness of the atmosphere prevents them from being sultry and oppressive. Neither does the soil become parched and cracked, but crops are matured naturally and rapidly.

One of the most interesting and valuable features of this region is the variety of elevation and climate found.

The elevation of Kennewick, at the foot of the valley on the Columbia River, is about 350 feet above sea level. North Yakima, thirty-seven miles south from Ellensburg in the Kittitas Valley, and eighty-seven miles north and west of Kennewick, is about 900 feet above the sea. Ellensburg is about 1,500 feet above sea level, and Prosser, between Kennewick and North Yakima, 650 feet. These figures will convey an idea of the general elevation of the various divisions or terraces, the gradation being quite regular down the valley.

PICKING CRANBERRIES.

This variation in elevation produces variation in temperature. The difference in temperature between the extreme northern and southern ends of the valley is somewhere between 10 or 12° and 20°, with the bulk

of the land lying between these extremes. Thus we have the longest and warmest summers in the Kennewick country, the shortest and coolest in the Kittitas, with the North Yakima and Sunnyside districts a varying mean. This difference in climate determines to some extent the character of crops best adapted to the various localities and is of decided advantage to the country as a whole.

Thus with certain products, such as watermelons, canteloupes, berries, and early vegetables, those raised in the lower valley are considerably ahead of those in the upper portion in point of time, and are thus out of the way of those coming later from the up-stream farms. This causes a succession of crops decidedly beneficial to all concerned. The mercury in the Sunnyside district, which is a mean of the valley, rarely drops below 20—25° above zero in winter.

A study of this valley in connection with the questions of irrigation and health will thoroughly repay the time spent upon it by the eastern man who purposes moving west.

The ownership and farming of a farm in an irrigation region, where the farms vary from ten acres for the smaller to forty acres for the majority of the larger ones, will strike the average eastern farmer who has been accustomed to from 160 to 500 acres, as farming on a small scale.

This is simply the difference between *extensive* and *intensive* farming.

Instead of scattering his efforts broadcast over a wide area, he *concentrates* them upon a small farm and makes *every rood of ground do its level best*.

He requires less help, a less number of work animals, etc., and his expenses are cut down in every direction.

The one word that represents perhaps better than any other the great benefits of irrigation is *independence*.

The farmer and fruit-grower is utterly independent of rain or drouth. He is neither drowned by too much nor famined by too little rain. Right at hand is the little stream he has bought and owns, ready to be turned at his own pleasure toward whatever corner of his little domain needs it.

There is scarcely anything that will not grow here. Oats, wheat, barley, corn, potatoes, melons, vegetables, fruits of nearly all sorts, timothy, alfalfa, and clover, all do well. No absolute rule can be laid down in regard to particular crops one should cultivate. Each man should determine for himself on the ground, being governed by the circumstances of the case, including the portion of the valley in which his farm is located.

The Yakima Valley is a natural sanatorium. Dread consumption does not find the climate congenial. It is too equable and dry. Bronchitis, asthma, pleurisy, catarrh, and pulmonary and laryngeal diseases in gen-

CAPE DISAPPOINTMENT AND LIGHTHOUSE.

STRANDED ON THE BEACH.

CRABBING AT LONG BEACH, WASH.

INN COTTAGE, LONG BEACH.

U. S. S. MONTEREY IN WILLAMETTE RIVER, PORTLAND.

eral, find little opportunity for working their nefarious schemes. La grippe is not common, the purity of the water and perfect drainage keep fevers at a distance, and rheumatism and neuralgia find no affinitive conditions for causing aching faces and bent-over backs.

South of the Lower Yakima Valley and west of the Columbia is a large plateau known as the Horse Heaven Country. It rises abruptly 1,000 feet above the valley, contains 300,000 acres or more of land, and is covered with bunch grass. There is very little rainfall, and yet farming is carried on to a considerable extent on the bonanza farm order, and large crops of grain are raised. It is as a grazing region, however, that it excels, and in this respect is supposed to be a horse's heaven.

On the low mountains and foothills bordering the Yakima Valley large herds of horses, sheep, and cattle are grazed. In winter they are driven down into the valley and fed and fattened, principally on alfalfa.

There are hundreds of miles of irrigation canals—many of them ten years old or thereabouts—in the valley. One can find a location to suit his fancy, it matters not how particular he may be. That part of the valley around Ellensburg is locally known as the Kittitas Valley. It is a large and beautiful expansion—a natural meadow.

THE WESTERN ZONE.

It is a long and narrow zone, lying, in Washington, along Puget Sound, the Columbia River and tributaries, and the Pacific Ocean; in Oregon, west of the Cascade range of mountains. It is as different from Central and Eastern Washington and Eastern Oregon as night is different from day.

In the western zone the full effects of the Japan current are felt. The climate is moist and warm, rainfall heavy in the valleys, and the snowfall heavy on the mountains. Vegetation is almost more than luxuriant—it borders on the semi-tropical. Forest trees grow to enormous dimensions. The finest bodies of timber—of the pine, spruce, fir, and cedar varieties—in the United States are to be found there. I have ridden through Washington forests for mile after mile, following a narrow trail twisting among the trees and ravines, and seen trees without number—thousands of them—that shot upward straighter than the traditional Indian for 100, 150, or perhaps 200 feet before putting forth a branch. An entire house of good size, and its furnishings, can be constructed from the timber contained in one of these trees.

As is to be expected there are many rivers and creeks found, rapid in their upper courses, quiet as they approach the level of the sound and sea. These streams are heavily timbered, have more or less good land along their bottoms, and are navigable, many of them, for considerable distances.

Puget Sound is a wonderful archipelago. It insinuates itself everywhere, forming isthmuses here, peninsulas there, in indefinite number, while its saline bosom is studded with countless islands.

Hop Drying Houses, Largest Hop Ranch in Washington.

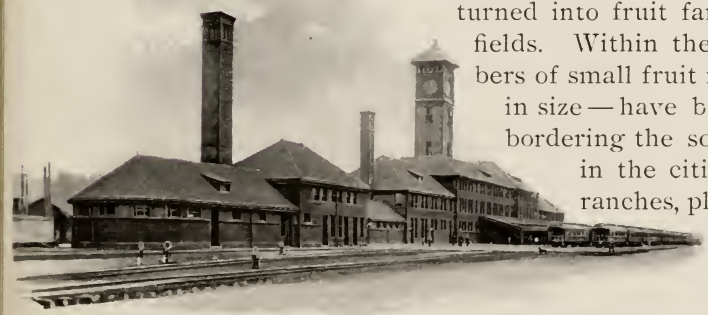
The mountains found in this region are the grandest, highest, and most notable of any in our country. The mountains of California, Colorado, and Montana, grand as they are, will not compare with them. This for two reasons—first, that these coast mountains stand as isolated peaks and are seen from base—sea level—to summit for every inch of them, not from an elevated plain several thousand feet above the sea; second, because they are covered with ice and snow — glaciers — and are as white as God's fleecy snowflakes, that re-blanket them each recurring winter, can make them.

The waters of the ocean teem with marine life. Fish of many varieties, oysters, clams, crabs, etc., are found in the bays of the sea and sound. The mountain streams are full of trout and the mountains of wild game.

Agricultural conditions on the coast are complicated somewhat by the necessity of clearing away the forests over wide, extended areas. The first clearing, or the cutting down of the trees on these large areas, is, of course, done by the timber companies. The large stumps and debris must then be removed by the farmer, who uses both fire and explosives to accomplish his purpose. When this timber land is cleared it makes good agricultural land.

There are, however, extensive tracts in the valleys of the coast that require little or no labor in preparing them for farms.

The islands of Puget Sound are valuable agricultural tracts and are rapidly being settled and turned into fruit farms and gardens and grass fields. Within the last few years large numbers of small fruit farms — five to twenty acres in size — have been started in the localities bordering the sound. Many of those living in the cities have bought these small ranches, planted them to orchards, and expect eventually to make



Union Station, Portland, Ore.
Finest Passenger Station west of Rocky Mountains.

them their homes. Within four or five years these orchards begin to bear heavily, and then the salaried clerk, artisan, etc., can retire to his farm or country residence and literally live under his own vine and fig tree. Others buy larger tracts and farm them as does the farmer in the Red River Valley, as a business, except that here the prune, plum, apple, cherry, small fruits, and nuts replace the wheat raised in the former locality.

As the region east of the Cascades is better suited to some particular fruits and products, so the country west of the mountains is especially favorable to certain productions.

Many varieties of fruits, vegetables, and cereals thrive equally in both sections. Plums, prunes, nuts of many sorts, and grapes find a congenial home on the ocean side of the Cascades.

Hops are largely raised and prove highly prolific and remunerative. On many of the coast lands cranberries are a standard crop.

One important feature of the coast climate is the improvement which takes place in the old varieties of fruit, flowers, etc., and the wonderful new varieties produced. Cherries and small fruits particularly show this. It is probable that nowhere else in our country does the cherry grow to such luscious proportions as in this climate.

The oldest settled valley in this zone is the Willamette of Oregon. It is about 100 miles long and 60 miles wide, and as fertile as land can be. The river itself is navigable for river steamers for the greater part of its course. The valleys of the Columbia and Cowlitz rivers have much cultivable land. Thousands of acres of orchards have been planted in these valleys within recent years. Portland, the largest city on the North Pacific Coast, is situated near the junction of the Columbia and Willamette rivers, and ocean vessels ascend both rivers to the city, and the output of the Willamette Valley is sent to the ends of the earth.

On Puget Sound are Seattle and Tacoma, two flourishing cities, and the peer of cities of equal size anywhere in the east. The foreign trade from these three cities to and from China, Japan, Australia, etc., is very large and increasing.

Many a farmer from the Eastern States, tired of the cold, wintry region of his birth, has settled most satisfactorily the question of a genial clime and comfortable home by removing to the warm, sunny, moist latitude of Western Washington or Oregon, where fruit-raising or farming on a soil of inexhaustible fertility makes it not much more than child's play.

TO BE really frank and accurate, it was not a canoe voyage, but—it might have been. It was a roomy, stanch, first-class rowboat that was used. The results were the same, plus, perhaps, a little more comfort, and besides, it sounds better to use the word canoe. In the hope of attracting attention to a most delightful outing, one that can be taken by a man and his wife, glad to escape for a time to the hills and woods and to pitch a tent upon the shores of a beautiful lake, or by a party of young men, or by a miscellaneous company chaperoned by some warm-hearted mother or discreet, elderly sister, I recount here a ten days' outing in the well-known Park Region of Minnesota.

Science tells us that this region was once covered by an enormous glacier. When it melted and receded it left a rolling country full of holes and hills. The holes are nearly all filled with water—lakes; the hills covered with timber. There are 10,000 lakes there, many of them connected by small streams, others apart and alone. The Northern Pacific Railway runs directly across this region. On a branch line running southwest from Wadena are Clitheral, Battle Lake, and Fergus Falls, all important lake points for summer tourists and anglers. On the main line are Perham, Frazee, Detroit, and Lake Park, surrounding which places for miles in every direction, lakes by the hundred are found. Detroit lies well up toward the summit of the divide which separates the Lake Park Region from the Red River Valley, and is nearly 1,400 feet above sea level and about 650 feet higher than St. Paul. It has a peculiar advantage for a trip of the sort mentioned, being situated upon Detroit Lake, which, by means of a narrow, sinuous stream, the Pelican River, is connected with a series of lakes south of it to the number of ten or twelve. This fact has been taken advantage of by a company who have dredged out the river for a portion of the distance, built a lock at one

point where the difference in level between two lakes necessitated it, and have provided a little steamer which makes several trips each day between Detroit and the lower lakes during the summer.

In the future another lock will be built and more dredging done, and several more and larger lakes will be added to the scheme. The tourist can then enjoy an inland lake excursion rather unique in its way. This extended trip it was which I took in a small open boat.

Arrangements were made for me by Mr. J. K. West of Detroit, who placed his own boat at my disposal. Our party consisted of three—the writer, his wife, and Mr. Haskins, a resident of Detroit, who went along as oarsman and cook. Haskins was used to roughing it, was a western hunter and trapper style of a man, whose hair reached to his shoulders, and he was familiar with the lakes to be visited. As it turned out he was a good cook and a congenial fellow, and by his good nature and willingness to work early and late added materially to the pleasure and success of the trip, a fact which those who have had experience in outings where the guide or cook was an important personage will appreciate.

There were one or two places where meals could be obtained, but otherwise we must supply our own provisions and sleep in tents. We outfitted at Detroit and pulled out from the boat landing on Detroit Lake one fine morning into a choppy little sea.

Mr. West had determined to see us safely on our way, and as it was deemed best to send our camp outfit by wagon to our first camping spot, he assumed the role of guide and oarsman for that day and Haskins drove the team and wagon.

An hour's rowing was sufficient to cross Detroit Lake to the outlet at Pelican River.

We then rowed leisurely through the little stream, which was bordered by swamp grass and willows. The ground sloped upward from the river and occasionally a farmhouse was seen. Where the roads crossed the stream, bridges were carried high enough overhead to enable the excursion steamers to pass beneath. This shining lane of water through the rank grass and swaying willows was in pretty contrast to the broad lake.

After crossing Lake Muskrat, one of the inferior lakes, another stretch of river was meandered and we reached the lock. Before us lay Lake Sally, a beautiful sheet of water about three miles long. Entering the lock, the upper gate was closed, the lower one opened and we descended in a few minutes to the level of Lake Sally. Our course was obliquely across it to Fairhaven Beach, where we had arranged to

have dinner. En route we visited one of several mineral springs in the locality.

Fairhaven Beach is a spot of exceptional advantages. Not only is it beautiful for situation, but it is upon a narrow, wooded point between Lakes Sally and Melissa, so that it matters not from which direction the wind blows, the guests find that one or the other of the lakes is always smooth. The Pelican River connects the two, so that one can quickly and easily row a boat from rough to calm water.

Melissa's shores have many summer cottages, owned by residents of neighboring cities.

After dinner we again embarked and pulled through the river, a tortuous little stream, to Lake Melissa. This lake is about the size of Lake Sally, quite different, however, in contour. Of the upper series of lakes, Lake Sally is perhaps the most attractive. Detroit Lake is larger and more irregular in contour, and at the eastern end will rival Sally. Melissa is more regular in outline, and a belt of timber nearly incloses it. Lake Sally is a lake of more contrasts. Seen from Fairhaven Beach it presents an exceedingly pleasing aspect, with its alternates of heavy massed timber, and open, green, black, or yellow fields, as depends somewhat upon the season and forwardness of crops and plowing. On the slopes farmhouses can be seen, partially hidden by timber or standing in the midst of the fertile fields about them. Lake Sally has a finer beach than Melissa, but the cottages on the latter face the rising sun, and have not, therefore, the afternoon glare of the water.

A half hour's pull and we had crossed Lake Melissa and entered what was about half and half a river and pond. A dam at Buck's Mill has raised the water in the Pelican River several feet, so that it overflows contiguous lowlands. Floating bog—masses of thin, mucky, black soil, from which grows a rank grass, sometimes several acres in extent—floats about as the wind propels it. Many trees, drowned by the overflow water, stretch out their dead, leafless arms in a mute, imploring way.

At Buck's Mill it was necessary to portage, but as there was no camp luggage to be unloaded it was an easy matter to lift and drag — principally drag — the boat across the land and launch it in the shallow waters of the river below the dam. And here we had the laugh on our oarsman. For a quarter of a mile and farther, the river below the dam was too shallow to float the boat. Deep holes were followed by sandbars and these again by holes, so that it was now float and now drag. There was no help for it, so that our guide and friend manfully took off his shoes and stockings, and, as in boyhood, rolled his trousers

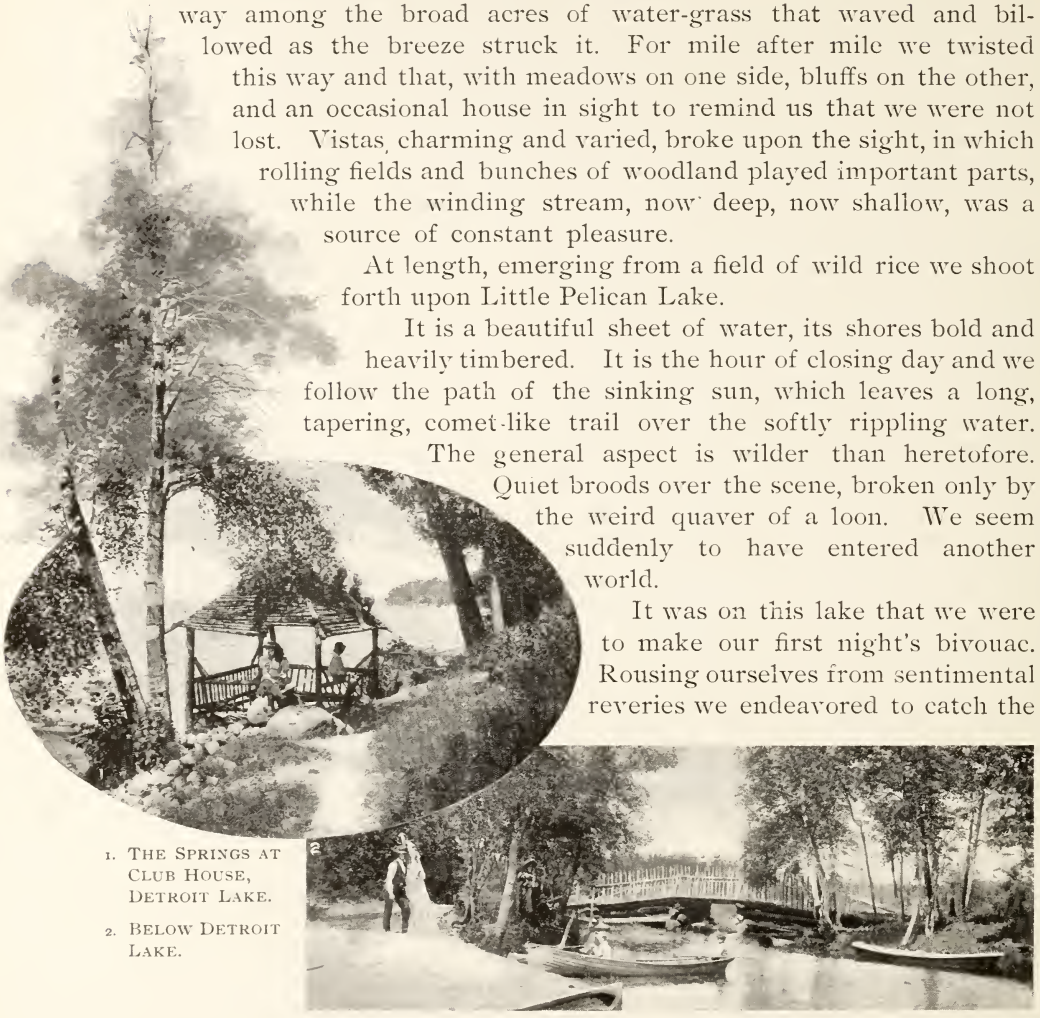
up to his knees and pushed and floated the boat down to where the stream became navigable, while the passengers trudged afield.

The stream now made amends by winding in the most attractive way among the broad acres of water-grass that waved and billowed as the breeze struck it. For mile after mile we twisted this way and that, with meadows on one side, bluffs on the other, and an occasional house in sight to remind us that we were not lost. Vistas, charming and varied, broke upon the sight, in which rolling fields and bunches of woodland played important parts, while the winding stream, now deep, now shallow, was a source of constant pleasure.

At length, emerging from a field of wild rice we shoot forth upon Little Pelican Lake.

It is a beautiful sheet of water, its shores bold and heavily timbered. It is the hour of closing day and we follow the path of the sinking sun, which leaves a long, tapering, comet-like trail over the softly rippling water. The general aspect is wilder than heretofore. Quiet broods over the scene, broken only by the weird quaver of a loon. We seem suddenly to have entered another world.

It was on this lake that we were to make our first night's bivouac. Rousing ourselves from sentimental reveries we endeavored to catch the



1. The Springs at Club House, Detroit Lake.
2. Below Detroit Lake.

blaze of a camp fire on the shore, but could see none. Rowing slowly we halloed again and again until at last an answering call directed our course to where Haskins was.

Our aid had reached the spot somewhat later than expected, and consequently had not accomplished a great deal in arranging camp. As it was dark and Mr. West was to return that night, supper was rather a

hurried affair and was taken somewhat on faith. After we had returned to Detroit I learned that friend West had had serious and gloomy doubts as to what our gastronomical experience was to be, basing his fears upon that haphazard meal. We soon relaxed the set lines of his face, however, when our expected bewailings became praises.

Supper over, West started home with the team, and those remaining set camp to rights for the night. Tents were raised, and from some haycocks at hand an important contribution toward soft beds was obtained.

During the night the wind blew furiously, but the day following dawned gloriously. From our tree-fringed camp we looked out upon a lovely sheet of water, a mirror of nature's, not a ripple disturbing the sleepy calm of its silvery surface. A few rods away lay Pelican Lake, the largest and finest one of the upper series of lakes. The road by the side of which we were camped ran along a narrow point between the two. After breakfast we broke camp and rowed slowly to the outlet of the lake. Passing under a bridge we found ourselves on Pelican Lake. After a short circuit we landed, climbed a high point that commanded a good view of the lake and sat down and viewed the scene. The lake is a fine body of water. The shores are pleasantly relieved from monotony by gently curving slopes being followed by bold bluffs; open, plowed fields by green fields, approaching the harvest time, or by patches of dark woodland. Long, wooded points push far out into the lake, forming between their sheltering arms, bays of calm water, even though the lake may itself be rough. From where we sit we look down upon a shallow spot where huge boulders lie sunning themselves above the water. A fish — a large one apparently, perhaps a sturgeon — is having great fun down among the big rocks. He splashes the water about and leaps and dives and raises a great commotion. From this circumstance we call this elevation Sturgeon Point, among ourselves.

One of the highest bluffs, Bare Bluff, lies off to our right, fringed thinly with trees on its crest, but its side toward the lake bare and yellowish gray.

Embarking again we row down to the outlet of the lake on the eastern side. There we find a camping spot sheltered from the wind by trees and high banks, and withal somewhat secluded. As we purpose remaining here for two days or more we take possession. We call the spot Boulder Point because of its prominent location and the great boulders that line the water's edge. When camp is arranged it is a charming spot. At night we sit by the camp fire and Haskins recounts hunting adventures and I tell of mountaineering experiences. Or, we row about the moon-rippled waters and troll for fish — and catch 'em, too.

During the time spent there we explored the nooks and crannies of the lake and rode about on a homemade steam launch owned by a settler on the lake shore. Butter and eggs and vegetables we obtained from those who lived hard by, and fish we caught as we needed them.

We saw a beautiful sunset one evening while camped there, one peculiar in its pearls and grays and orange tints. It reminded me of Bradford's paintings of arctic scenes. After the sun had, as we supposed, finally disappeared, through some peculiar arrangement of the clouds it reappeared as a monstrous globe of fire. It was a blood-red disk of great depth of color and its effect as it o'erspread the water was indescribable.

"Fiercely the red sun descending,
Burned his way along the heavens,"

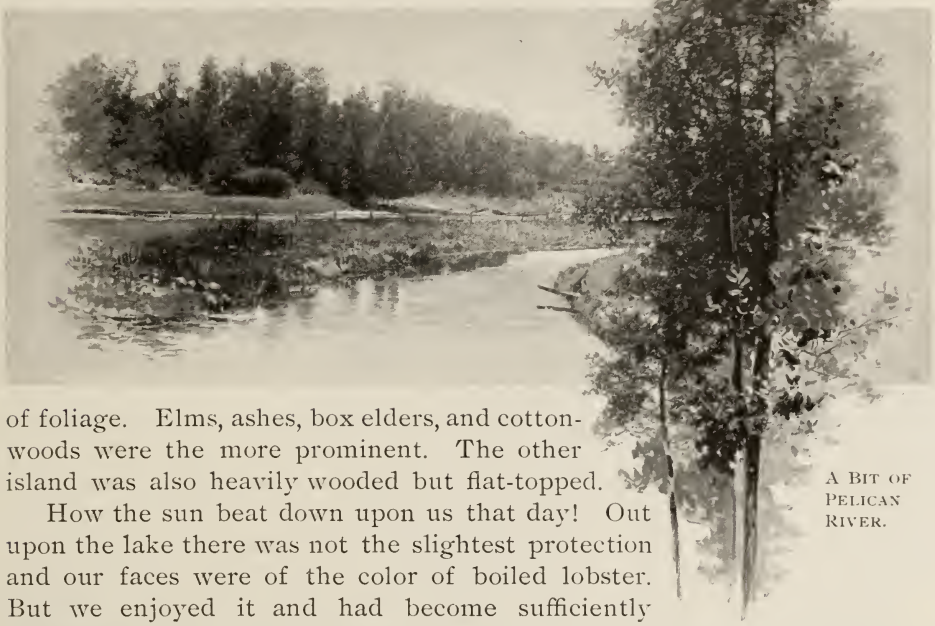
I had never seen so strongly exemplified before.

Beyond Pelican Lake our route seemed to take us more and more out of the world. And yet it did not. At intervals we saw evidences of humanity in waving grain-fields or an occasional house. From Pelican Lake the river meandered into Fish Lake, and then wound in a shining stretch for many miles to Lake Lizzie. Our exit from Fish Lake was through an expanse of rushes where there was no channel. We simply poled, and pushed, and rowed when there was clear space for it, and finally came out into clear water. That ride between Pelican Lake and Lake Lizzie was by all odds the finest piece of river navigation on the trip. How the little stream did try to run toward all points of the compass! It was deep, it was shallow, it was wide, it was narrow, it rippled over pebbly beds, it sluggishly dragged along over deep, dark pools; it ran between low-lying, sedgy banks, it scraped the sides of overhanging bluffs, it was shadowed by trees, it was bathed in warm sunlight. And every freak of its freakish spirit we more than enjoyed. At one locality the ducks flew up and away again and again, just far enough ahead every time to keep out of gun shot. At another, we came upon a cow deep in the water, cooling her udder, and just this side of her we suddenly discovered a wire fence across the stream, strung there to prevent her and her friends from trespassing on forbidden territory. We soon worked under the fence by carefully lifting the strands of wire and ducking our heads. Sis' cow, as Uncle Remus would say, thought to race us through the water, but came out a poor second.

After another interval of unadulterated enjoyment we came to a bridge. It was too low for us to row under, and how we did dislike to unload, lift and drag the boat across the land and then reload it! By good maneuvering we managed to squeeze the boat under the obstacle

by unloading a portion of its freight. Soon thereafter we debouched upon the sun-washed surface of Lake Lizzie.

The water here was pea-green in color, evidencing shallowness. It was a marked contrast to the deep green of the other lakes. Its shores were for the greater part well wooded, and a few houses were seen at wide intervals. The lake was rather oblong in shape, and the afternoon was well gone when we reached its southern end. Midway were two islands, fairly large, one of bold, rocky front and covered with a variety of foliage. Elms, ashes, box elders, and cottonwoods were the more prominent. The other island was also heavily wooded but flat-topped.



A Bit of Pelican River.

How the sun beat down upon us that day! Out upon the lake there was not the slightest protection and our faces were of the color of boiled lobster. But we enjoyed it and had become sufficiently hardened by this time to endure it with but little discomfort. Haskins rowed steadily all day with but one brief stop at one of the islands, and another stop at noon for luncheon.

We found the lower end of Lake Lizzie one vast field of rushes. Among them were long lanes and wide bays of water, so that we were not impeded by them. Large numbers of mud hens were floating among these rushes. Our course lay toward the southeastern part, where a narrow channel led into Lake Crystal.

When we first obtained a glimpse of this beautiful lake it seemed as if it was truly what its name implied — a great crystal. There was not a breath of wind, and as we floated slowly out over huge boulders which rose nearly to the surface—for there the water was shallow—it seemed unreal, as if it were other than water, a plain of silver.

The lake seemed rather oval in contour, and there was apparently no sign of civilization anywhere upon its borders. Heavy woods, except at a few spots, added to the feeling of isolation.

As soon as we had progressed far enough upon the glassy surface to observe the lake in its entirety, I was impressed with the description of Lake Otsego, by Cooper, in "The Deerslayer," and the name "Glimmerglass" came instantly to mind. The utter absence of ripple or wave caused the reflection to be supremely perfect. Not only was the lake utterly unlike any yet seen, but the effect caused by the solitude, reflection, and the general conditions surrounding us as we floated idly upon the crystal sea, charmed, captivated by Nature's wholesome, pervading witchery, was so different from any hitherto experienced as to awe us and cause our conversation to be restrained and hushed.

We decided to bivouac for a night upon so restful a shore and turned our prow toward a timbered, yet open spot, that commanded a fine view of the lake.

As the sun glided gently adown the western horizon, the flames of our large camp fire leaped to touch its expiring rays. As the night drew on, the fire's incessant crackle made sweet music for our ears, and its warm light illumed the forest aisles and cast their ruddy glare out upon the now blackening waters.

Tired with our day's long ride and sunburning, as we reclined upon the cool earth we felt indeed,

> "There is a pleasure in the pathless woods,
> There is a rapture on the lonely shore,
> There is society where none intrudes."

Soon after landing we had made known to us the fact that humanity was nearer us than we knew, by unmistakable sounds from a hidden farm house on the farther shore. Now other sounds became audible. Far out on the water the cries of a pair of loons went up into the night, and nearer at hand the night birds called to each other in soft love notes. A leaping fish splashed the waters of the lake, and the faint bark of a dog and the lowing of a cow came faintly from a distance.

There was a plentiful supply of dead and dry logs, and we were generous in supplying our fire with material.

We were tired, very tired, and we enjoyed the relaxation that came with the fire and night, after our hot supper was eaten, and our stimulating coffee drank from plain tin cups. And when we threw ourselves upon our blankets to sleep, how restful and comfortable they seemed!

The following day was spent in slowly rowing about the lake and

1. The Locks at Lake Sally.
2. Fairhaven House.

3. Bathing Scene, Fairhaven Beach.
4–5. Pelican Lake.

NORTHERN PACIFIC TRANSCONTINENTAL EXPRESS.

YELLOWSTONE NATIONAL PARK

IS now generally known, Yellowstone Park is principally located in Northwestern Wyoming. There is a narrow strip in Montana, on the north, and one in Idaho, on the west. As established by law, its area is 3,412 square miles. On the northwest, north, east, and south it is hemmed in by high mountain ranges, whose highest peaks attain an altitude of from 10,000 to 12,000 or 13,000 feet above sea level. Between these ranges the Park plateau is an undulating one, from 7,200 to 8,300 feet elevation above the sea. It is a region of much rain and snow fall, and the forest development is great and the park flora unusual and varied. The great continental divide extends from the southeastern corner northwesterly across the Park, and the tourist crosses it on the way from Upper Geyser Basin to Yellowstone Lake, amidst a region of wild grandeur and primeval beauty.

In a general and superficial way, the region is not unlike a hundred other places of equal area in mountainous localities. It is in its special characteristics that it assumes preëminence and importance.

If I were asked to specify in a word the predominant features of the Park, I think I should use the word, comprehensiveness. In the strange, unique, educative, unusual, marvelous freaks or exhibitions of nature found there, no other locality of equal or even greater area in the world, within reasonable limits, compares with it. Its comprehensiveness is amazing. It is, indeed, the World's Wonderland, not ours alone.

ITS HISTORY EPITOMIZED.

The ancient history, so to speak, of the Park dates back to the earliest years of this century, to the celebrated expedition of Lewis and Clark.

JAMES BRIDGER.

The modern history is contained within the last thirty years. One of the members of the Lewis and Clark expedition was a man named John Colter. He was one of the nomadic trappers and mountaineers of the old days, and appears, withal, to have been a good deal of a man. Without doubt he was the first white man to see any of the phenomena of the region now known as Yellowstone Park. When the before-named expedition was nearing St. Louis on its return, in 1806, Colter obtained his discharge, and with two friends made a bee line, figuratively speaking, for the headwaters of the Missouri River. He explored, in his day, a large section of the eastern Park region; discovered what is now Jackson Lake, south of the Park; Yellowstone Lake, the Grand Cañon, and Mammoth Hot Springs, of the more important localities. Returning to St. Louis, he imparted to Captain Clark much information, which was incorporated upon the Lewis and Clark map of 1814. One nearly tragic episode in this man's life that occurred on the Jefferson River, west of the Park, is found in Chapter XV of Irving's "Astoria."

James Bridger was another of the bright and shining lights of western frontierism. For long years no man, possibly excepting Kit Carson, was better known over an extended region than was "Jim" Bridger. He was the discoverer of Great Salt Lake, and a mountaineer of unsurpassed ability. He was in the West as early as 1820, and died in Missouri in 1881. Bridger's knowledge of the Yellowstone region was thorough and very complete. His stories, of great accuracy, were completely disbelieved, as the idle tales of a Munchausenish trapper, and the papers refused to print them. Then indeed did the old fellow give them fairy tales, woven from the depths of a vivid imagination. He lived to see his former statements verified by indisputable authority.

Between the era of the explorations of Colter and Bridger, and the years 1869, 1870, and 1871, there were several parties penetrated this land of geysers and cañons, but none of them seriously impressed the public with what was to be found there. The DeLacy party missed a

glorious opportunity to immortalize itself. It evidently failed to appreciate the importance of its discoveries.

In 1869 Messrs. Folsom, Cook, and Peterson spent thirty-six days exploring the Park country. They were so dumfounded at what they saw that they hardly dared to recount their adventures for fear of disbelief. Enough was told, however, to make certain the execution of a plan, the following year, long contemplated by a company of Montana gentlemen. For several years these men had intended to explore the Park country. The reports of Indian annoyances and other reasons had prevented the execution of the plan. Now, however, enthused by Cook and Folsom's narratives, they determined to be balked no longer, and, in 1870, the expedition finally started. This party was known as the Washburn party, after Gen. H. D. Washburn, Surveyor-General of Montana, who was formally made its leader. In many respects its work was the most important of all explorations made of the region. A recital of its adventures, amusing, tragic, interesting, astonishing, would require a paper in itself. It thoroughly explored the region, missing only the Mammoth Hot Springs, and completely substantiated Bridger's wonderful stories and those of his successors in exploration. The more valuable work done by it was in making known to the world the absolute fact of the existence of this remarkable land. This was done in such a manner as to paralyze adverse criticism or distrust, and settle at once and forever the whole question.

In 1871 and 1872 the region was explored by Hayden's United States Geological and Geographical Survey. This, of course, set the seal of Government approval upon previous reports.

Subsequent to the Washburn and Hayden explorations, many others were made by army officers, civilians, and the U. S. Geological Survey. General Sheridan and President Arthur, with other notables, passed through there in 1880.

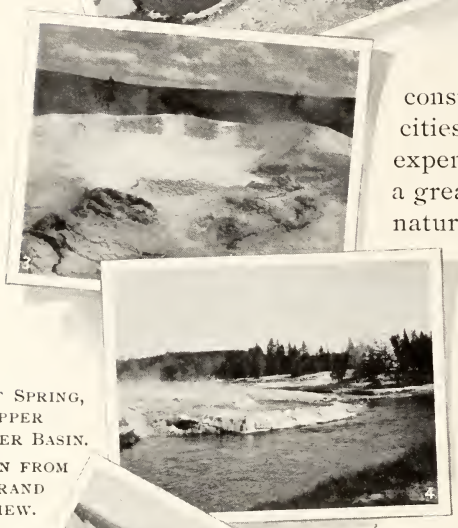
In 1883 the Northern Pacific Railway reached the Park, since which time it has been an open recreation ground to all who chose to avail themselves of it.

ITS EDUCATIONAL VALUE.

I desire to remark especially upon the educational value of a tour of the Park to teachers and scholars. It is hard to do this in the way I would like to do it. Mere words and descriptive phrases or didactic statements seem flat and tame beside the actual lesson taught by inspection.

The great Park is nearly 1,500 miles west from Chicago. The regular tourist trip gives 5½ days in the Park. This means that the round trip

1. West from Golden Gate.
2. Mushroom Spring, Lower Geyser Basin.
3. Mammoth Paint Pot, Lower Geyser Basin.



4. Cliff Spring, Upper Geyser Basin.
5. Cañon from Grand View.

from Chicago and St. Louis will consume eleven days; from Atlantic coast cities, thirteen days. I am aware that the expense necessary to make this tour seems like a great deal for so short a time. The teacher naturally reasons that it takes a large slice out of his or her income or savings; it requires but two weeks of a two months' vacation; where can he go and what can he do for the remaining weeks, and how much money will he or she have left to apply to that time? I think that I appreciate the force of all this. I think that I also appreciate a fact that the other can not — the great educational value of the Park, and that it is worth the sacrifice if one desires to put it in that way.

The teacher's calling is a sacred, a momentous one. The greater one's observation and the more extended the mental horizon, the better the teacher. "Book larnin" is all well enough, but in many ways observation is better — or, more truthfully, perhaps, each is complementary to the other.

You have read about Niagara from early childhood, but you never knew Niagara until you saw it. From earliest infancy you have been familiar with the Capitol at Washington, from pictures, but until you stood speechless before the structure you never dreamed of its magnificence.

More than either of these or a thousand other scenes and objects, Yellowstone Park needs to be *seen* to be known and understood. Why? Simply because it contains phenomena that are curious, uncommon,

occult, unrelated to things we ordinarily see and know. Analogies with things seen elsewhere are almost impossible. It is not a chapter only of a book — it is the book itself.

The majority of people who go to the Park go but once. I have no hesitancy in saying that every teacher, student, or younger scholar who goes there can well afford even strict economy and sacrifice in various ways for the gain that comes. The trip is not ended either when the Park is left behind. "How often, oh, how often," in after months and years, will the incidents and scenes of the tour come back to you! Again you will see Old Faithful play, again ride through the Golden Gate, again go into raptures over Yellowstone Lake and be hushed to awe at the grandeur of the Grand Cañon.

The book of Nature *must* be read to know and understand it, even as the volume that comes from the typesetters' hands. And a most wonderful, thrilling book is that of Yellowstone Park.

ITS GEOLOGY.

The oldest rocks of the geological series, the granites, gneisses, etc., the foundations of the earth, are found here. The great seas that once overflowed the region left sedimentary rocks thousands of feet thick. Then "The region became one of profound dynamic action and a center of mountain building on a grand scale." Great orographic movements took place, and the large rock beds were tossed up and down, wrinkled, contorted and folded and faulted.

Then came the period of fire, when Vulcan reigned. The region was overflowed by the volcanic materials that poured forth.

And then came the ice age, when glaciers hundreds of feet thick and scores of miles long, plowed along over hills and through valleys, scattering their debris here, there, and everywhere.

Since the glacial epoch, the hydrothermal agencies have been actively at work.

The traveler in the Park country will be interested in knowing which of the mountains were old-time volcanoes. The three principal mountains found here were also the principal centers of volcanic energy. Electric Peak, at the northern end of the Park, 11,155 feet high, was one of the greatest and earliest volcanoes. Mount Washburn, more than 10,000 feet high, near the Grand Cañon, and Mount Sheridan, 10,200 feet in elevation, south of Yellowstone Lake, were two of the later volcanoes. By far the larger part of the Park plateau, as it stands to-day, is composed of igneous rocks. The lavas were poured out in enormous quantities and very generally covered the sedimentary beds. Erosion has done its part in making the topography of the region what it now is.

SPRINGS AND GEYSERS.

The phenomena peculiar to Yellowstone Park are not all concentrated in certain localities. The entire region swarms with them, so to speak. They line the roadsides, they dot the hills, they fill the hollows. Turning a curve in the road, a cascade comes into view; a signboard suddenly announces the fact that back among the trees is Apollinaris Spring, a spring of wonderfully delightful drinking water; leaving the forest the horses trot across a clear space and over a bridge, and Obsidian Cliff looms up ahead. Thus it goes. Scarcely a mile without something new and interesting. Singly or in groups, small or large, this feature is universal, and the more one sees it the more one wonders. The springs, almost entirely of hot water, will rouse the enthusiasm of the fair sex especially, by their beauty and delicacy of color. Whether it be Beryl Spring in Gibbon Cañon, Sunset Lake at the Upper Basin, Congress Spring at Norris Basin, or one of the large variegated pools at Mammoth Hot Springs, this striking clearness, purity, brilliancy, and delicacy is omnipresent.

The divisional line between a geyser and a spring is not always clear. Many beautiful pools unsuspected of geyser proclivities have suddenly burst forth in eruption and confounded the critics. They may, it is true, lie dormant for years, as the noted Excelsior Geyser at Midway Basin, but they have at least thus demonstrated the fact that the line between the two classes is often an uncertain one. Some springs, like the Chinaman at Upper Geyser Basin, may never, perhaps, have a natural eruption, but may erupt under artificial stimulus and when conditions are favorable. There are more than 3,600 springs in the Park. They are found by the roadside, in the valleys, on mountain sides, in cañons, alone, in groups. They are of all sizes, depths, colors, forms. In one respect I think they are all alike—they are attractive. Some are, of course, for one reason or another, more attractive than others.

While the phenomena of the Park are largely grouped in families, as it were, this is not entirely the case. The springs, for example, are the particular feature of the Mammoth Hot Springs, but at the Geyser Basins, where the geysers form the predominant feature, there are hundreds of springs, paint pots, etc. At Shoshone Geyser Basin, geysers and springs are intermingled, and along the shores of Yellowstone Lake, paint pots, mud geysers, and fumaroles are found.

At Mammoth Hot Springs, where an afternoon is spent in course of the regular Park tour, there is much variety to be found among the springs. According to the temperature of the waters there are various colors, all of them perfect, some of them of extreme delicacy of tint. The springs rise in narrow terraces on the eastern slope of Terrace Mountain.

They form a prominent feature of a landscape not devoid of other interesting features. The formation of which these terraces is composed is known as travertine, a deposition of limestone — not silica — peculiar to hot springs. The water overflows the bowls or reservoirs gently, almost drippingly, forming fronts of marvelous

OLD FAITHFUL.

fretwork and carving, in many cases, stalactitic in character. As the water, in descending to lower levels, and even in the same pool, cools, the colors change. Thus there will be seen an amazing play of colors in water itself as clear as crystal. In some of the springs algæic forms are seen. Description of these is almost impossible. They are of a filamentary texture, shine like satin, and are almost constantly in motion, gently swaying

VIRGINIA CASCADES.

with the slight currents which are found in some of the pools. In all, there are nearly 300 acres of these springs, terraces, caves, etc., on the side of Terrace Mountain. Interspersed among them are bits of timber, and cliffs that were once laved by hot

EXCELSIOR GEYSER AND TWIN BUTTES.

waters and were as beautiful as those now washed by the thermal flow, but which are now crumbling and weathered.

The tourist spends the afternoon in climbing about and viewing Cleopatra, Jupiter, and Minerva terraces, Cupid's Cave, Devil's Kitchen, Elephant's Back, Narrow Gauge and Angel terraces, Orange Geyser, Bath Lake, and other places.

All the drainage of these springs is carried away by an underground river — Boiling River — to the Gardiner River, a mile or more, and many hundred feet below them.

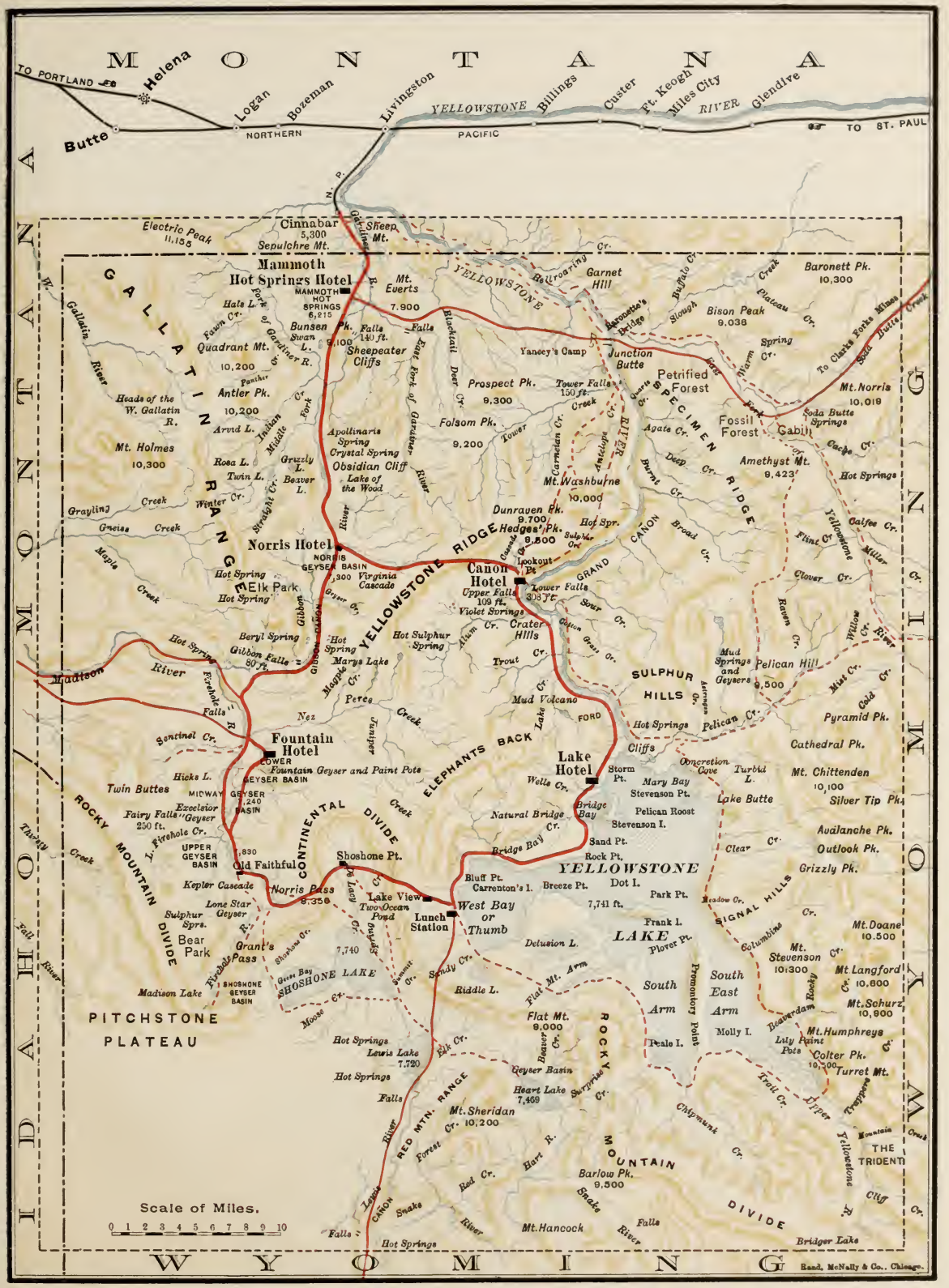
NATURAL STEAM HOT HOUSE AT UPPER GEYSER BASIN.

Undoubtedly the geysers are the most unusual and peculiar phenomena of the region. I looked upon them the first time with awe, almost with reverence. I do even now somewhat.

The wind bloweth where it listeth. Thou hearest the sound thereof, but canst not tell whence it cometh nor whither it goeth. The geyser is something like the wind. Almost without warning it vaults into the air, and before surprise is over, it has gone — where? We see the sepulcher where it lies buried until the hour of its resurrection, but naught can we see of it until that time. Then it rises, but to vanish quickly.

Regarding the theory of the geysers, it seems probable that there is still something to learn about them. Whether Bunsen's, the accepted theory, will explain everything about their formation, action, etc., is, I think, not a settled fact. One thing seems certain, *i. e.*, they do not necessarily extend far beneath the surface of the ground. Surface water, percolating below and becoming heated, undoubtedly furnishes the water necessary to the geyser's life. An observer of several years at Upper Geyser Basin claims to be able to tell when the geysers, Old Faithful, the Grand, Splendid, Castle, Giant, etc., will play at their best. If the snowfall in winter, or the rainfall in spring is unusually heavy, they are more or less retarded in frequency and effectiveness. The supply of water is then too great for the amount of subterranean heat. It takes more time for the kettle to boil, and at first, therefore, the intervals are longer than usual and the strength of the eruption less. As the season progresses the action of the geysers becomes more free, more frequent, and more powerful.

Some of them throw out, during eruption, sticks, worn, bleached and with frayed ends, or occasionally small roots of trees, or small stones. Those who visit the Great Fountain Geyser—not the Fountain Geyser near the hotel—at Lower Geyser Basin, between its eruptions, will, upon walking about and over its wide basin, find scattered in the pools of pellucid


MONTANA
IDAHO
WYOMING
TO PORTLAND
Helena
Butte
Logan
Bozeman
Livingston
YELLOWSTONE RIVER
Billings
Custer
Ft. Keogh
Miles City
Glendive
NORTHERN PACIFIC
TO ST. PAUL
N. P.
Electric Peak 11,155
Cinnabar 5,300
Sepulchre Mt.
Sheep Mt.
Mammoth Hot Springs Hotel
MAMMOTH HOT SPRINGS 6,215
Mt. Everts 7,900
Garnet Hill
Baronett Pk. 10,300
Bison Peak 9,038
Junction Butte
Petrified Forest
Fossil Forest
Gabill
Mt. Norris 10,019
Soda Butte Springs
Amethyst Mt. 9,423
Hot Springs
Quadrant Mt. 10,200
Antler Pk. 10,200
Mt. Holmes 10,300
Bunsen Pk. 9,100
Sheepeater Cliffs
Prospect Pk. 9,300
Folsom Pk. 9,200
Yancey's Camp
Apollinaris Spring
Crystal Spring
Obsidian Cliff
Lake of the Wood
Mt. Washburne 10,000
Dunraven Pk. 9,700
Hedges' Pk. 9,500
Norris Hotel
NORRIS GEYSER BASIN
Virginia Cascade
Canon Hotel
Lookout Pt.
Upper Falls 109 ft.
Lower Falls 308 ft.
Violet Springs
Crater Hills
Elk Park
Hot Spring
Beryl Spring
Gibbon Falls 80 ft.
Hot Sulphur Spring
Marys Lake
Mud Volcano
Mud Springs and Geysers
Pelican Hill 9,500
Pyramid Pk.
Cathedral Pk.
Mt. Chittenden 10,100
Silver Tip Pk.
Avalanche Pk.
Outlook Pk.
Grizzly Pk.
Mt. Doane 10,500
Mt. Stevenson 10,300
Mt. Langford 10,600
Mt. Schurz 10,900
Mt. Humphreys
Colter Pk. 10,500
Turret Mt.
Fountain Hotel
LOWER GEYSER BASIN
Fountain Geyser and Paint Pots
MIDWAY GEYSER BASIN
Twin Buttes
Excelsior Geyser
Fairy Falls 250 ft.
UPPER GEYSER BASIN
Old Faithful
Kepler Cascade
Norris Pass 8,356
Lone Star Geyser
Sulphur Sprs.
Bear Park
Grant's Pass
Shoshone Pt.
Lake View
Two Ocean Pond
Lunch Station
West Bay or Thumb
Lake Hotel
Storm Pt.
Mary Bay
Stevenson Pt.
Pelican Roost
Stevenson I.
Natural Bridge
Bridge Bay
Sand Pt.
Rock Pt.
Dot I.
Park Pt.
Frank I.
Plover Pt.
Delusion L.
Bluff Pt.
Carrenton's I.
Breeze Pt.
Lake Butte
Concretion Cove
Turbid L.
Clear Cr.
Meadow Cr.
Columbine Cr.
Promontory Point
South Arm
South East Arm
Molly I.
Peale I.
Flat Mt. 9,000
Flat Mt. Arm
Riddle L.
Sandy Cr.
Geyser Basin
Heart Lake 7,469
Mt. Sheridan 10,200
Barlow Pk. 9,500
Mt. Hancock
Bridger Lake
Madison Lake
Lewis Lake 7,720
Hot Springs
Falls
Scale of Miles.
0 1 2 3 4 5 6 7 8 9 10
GALLATIN RANGE
YELLOWSTONE RIDGE
SPECIMEN RIDGE
SULPHUR HILLS
ELEPHANTS BACK
CONTINENTAL DIVIDE
ROCKY MOUNTAIN DIVIDE
SIGNAL HILLS
RED MTN. RANGE
THE TRIDENT
PITCHSTONE PLATEAU
Madison River
Gallatin River
Yellowstone River
Rand, McNally & Co., Chicago.

water, small, white, rounded pebbles and stones. These have been expelled from the geyser and show in their polishing and uniform sphericity the effect of constant motion and attrition. These, seemingly, are thrown out with little force, as the geyser does not play to great heights, but instead throws out an enormous and heavy, bulky volume of water, and the marble-like sphericles are found near the crater of the geyser.

Some of the geysers, undoubtedly, have subterranean connection. Others, very close together and where such connection might naturally be supposed to exist, have none whatever.

There is much individuality found in the geyser family. Some of them are wonderfully lazy, others have a surplus of energy. The smaller tots and babies are like human children, full of antics. They are impressible, and, like many a young hopeful, "show off" when least expected, and are quiet when it is desired that they exhibit their accomplishments.

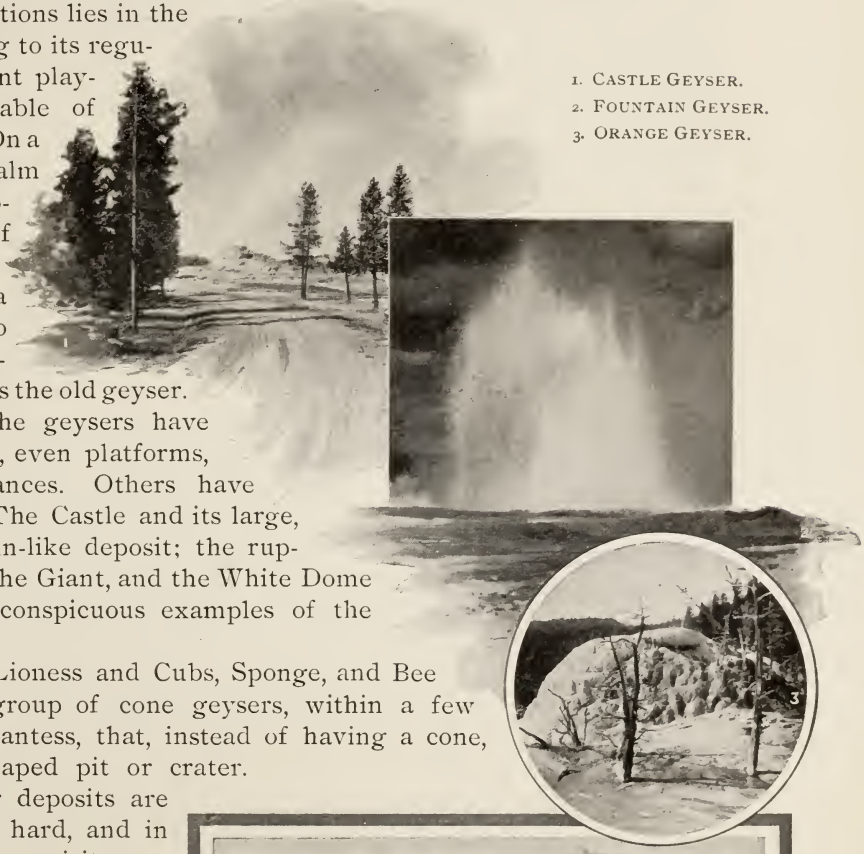
Old Faithful, the Fountain, the Minute Man, and Black Growler are different types of this interesting family. The latter is the only steam geyser, pure and simple, in the Park. No one, I believe, has ever seen it when *not* in evidence. For a century, for aught we know, it has been bellowing and filling the air with its roar. One would think its lungs and throat were worn out, but it gives no sign of wear and tear. Its round, beautiful steam column comes forth with tremendous energy, and it can be heard miles distant.

The Minute Man is near the Growler. It shoots up a slender, spurty stream every fifty seconds, to a height of twenty or thirty feet. It plays but for a few seconds. Indeed, it has hardly begun before it is done. It is a sort of jumping-jack geyser, full of vivacity, and should be particularly interesting to the younger element.

The Fountain Geyser is similar to the Great Fountain. It does not attain the elevation in its eruptions that some of its cousins of the Upper Basin do, but its fountain-like display is a very fine one. A great mass of clearest water is lifted bodily out of its cistern, and lashed and thrown into jets and masses of spray that leap upward and outward at all angles. The body of water tossed and pitched by the hidden spirit within, in convulsive throes strives to escape its tormentor. The jets of spray are projected from thirty to forty feet into the air, and, turning, deluge the knoll with water which runs swiftly away in streams and sheets of steaming, scalding crystal.

Old Faithful is very different from any of these. Its periodicity lengthens a little each year, but it regularly plays from every sixty-five to seventy minutes. Its eruption lasts from six to seven minutes. There is much of both steam and water thrown out, and when the wind is blowing moderately the exhibition is a beautiful one. The weight of the

water holds the column rigid and vertical for the 125 to 150 feet of its height, while the steam, wafted up and about, moves with singular dignity and majesticity, at times investing the scene with a grandeur that awes the beholder to silence and wonder. An interesting feature of Old Faithful's eruptions lies in the fact that, owing to its regular and frequent playing, it is capable of great variety. On a sharp, frosty, calm morning in September, one of its grand exhibitions is a revelation. No wonder that every tourist loves the old geyser.



1. CASTLE GEYSER.
2. FOUNTAIN GEYSER.
3. ORANGE GEYSER.

Some of the geysers have built up cones, even platforms, in some instances. Others have none at all. The Castle and its large, castellated, ruin-like deposit; the ruptured cone of the Giant, and the White Dome are the most conspicuous examples of the former.

The Lion, Lioness and Cubs, Sponge, and Bee Hive form a group of cone geysers, within a few rods of the Giantess, that, instead of having a cone, has a bowl-shaped pit or crater.

The geyser deposits are siliceous, very hard, and in many cases of exquisite pattern.

There are many geyser areas in the Park, but thus far those mentioned are the only ones accessible to the ordinary tourist.

4. QUADRANT MOUNTAIN AND ANTLER PEAK.
5. SPONGE GEYSER.

CONTINENTAL DIVIDE AND YELLOWSTONE LAKE.

The ride through the Park is at all times an attractive one. Between the Upper Geyser Basin and Yellowstone Lake, where the road winds across the Continental Divide, it is especially wild and inspiring. Soon after leaving the Upper Basin, Keppler Cascade, one of the finest in the Park, is passed. It is in a cañon at the side of the road, and the coaches stop there that tourists may alight and view it.

In the midst of the mountains Shoshone Point is reached. From the Point, Shoshone Lake lies shimmering far below in the very embrace of the mountains. It is a sapphire in the midst of emeralds. Except for the road excavated along the sides of the mountains, the region about Shoshone Lake is the same wild, pristine place that it was when Colter wandered through its leafy arcades.

At Shoshone Lake there is an interesting family of geysers that some day will attract many visitors. Shoshone Lake is, itself, a spot well deserving a visit when the Government shall have made it easily accessible.

The timber and beautiful little valleys in this part of the Park are where the deer and elk love to roam in summer. Solitude broods over it, broken only by the tread of these animals through the forest, the whistle of the wind in the tree tops, the crashing of the thunder among the mountains, or the cries and songs of the birds.

The ride through this portion of the Park is one of exhilaration. The rare scenery and rarer atmosphere, the frequent changes of vista, the creeping along the mountain sides and sweeping around giant headlands, the feeling that one is indeed clear of the conventionalities of communities, and is breathing the pure air of the hills and mountains untainted by the smoke of furnaces or the gases and odors of cities, fills and thrills one.

After a ride of several hours in which one rises higher and higher on the wings of emotion and enjoyment, the climax is reached at Yellowstone Lake.

Turning from a parklike spot where clusters of trees break the line of vision, the coach approaches the edge of the plateau preparatory to descending to the lake level. The prospect opens, and over and through a fringe of trees the lake breaks suddenly upon the sight. If placid and smooth, the view is one of peace and restfulness, and as the eye scans the surroundings, noting the realm of vanishing water, the high, bare-topped mountains on the farther shore, Mount Sheridan, looming up to the south, and the foreground green and refreshing, a sense of pleasure and content steals over one.

If, as I have seen it, a storm is sweeping across the bosom of the

mountain sea and nature is in high dudgeon about something, the scene is transformed into one of anger and commotion. Far out on the water the rain can be seen driven in a black wall before the wind. The blacker clouds scud along high overhead, and the lightning's flash and thunder's crash punctuate the stillness. The lake tries to work itself into a miniature sea and evolve big white-caps, but it makes a poor success of it. In a short time the storm has passed off among the mountains, and the angry face of nature has relapsed into a broad smile at the miserable failure it made of it.

The coach ride along the shores of the lake is an unusually enjoyable one. The Paint Pots, near the lunch station, are passed, and then for miles the road is alongside and at the level of the lake. At each turn of the road, or change in elevation, a change of scene follows.

The hotel at Yellowstone Lake is near the outlet, and commands a view up the lake. For a day's rest, on Sunday, for example, this spot will commend itself to tourists.

Between the lake and the Grand Cañon the scenery is quite the reverse of that between the Upper Geyser Basin and the lake.

The road follows the Yellowstone River, crossing Hayden Valley. Two prominent objects are passed — Mud Volcano and Crater Hills. The former is a conical vent in the side of a hill, where there is a continual belching of mud. It is, in a sense, nauseating, but it is, to me, one of the most interesting objects in the Park, quite unlike anything else. It is at the side of the road and easily seen. Formerly its explosions were terrific; now they do not project the contents half-way to the top of the opening.

Crater Hills are also known as Sulphur Mountain. They consist of two low hills, between which the road runs, and of which sulphur is one of the component parts. At the base of one of them is a boiling sulphur spring, some ten to fifteen feet in diameter. It splashes and boils to a height of from two to five feet above the surface. It is rich in color, and as attractive as the Mud Volcano is unsightly. Tourists can easily see it without leaving the coach.

THE GRAND CAÑON.

The fifth day's tour of the Park leaves the tourist at the Grand Cañon Hotel in time for luncheon.

The first sight of this cañon, the wonderful handiwork of God, will, it is safe to say, upset all of one's preconceived ideas of it.

In describing the sights of Yellowstone Park I always hesitate when I come to the Grand Cañon. There are some places on earth where one feels so near to the presence of the Almighty, that it seems little less

GRAND CAÑON AND LOWER FALLS OF THE YELLOWSTONE.

than profanity or sacrilege to attempt to depict their glories. It is so here. One must, however, often attempt a task, even though it seem to be impossible to perform it satisfactorily.

Bishop Earl Cranston of the Methodist Episcopal church visited the Park in 1897. The bishop had seen much of the best scenery of this country, and his expectations were not keyed to a high pitch. How far short of the reality his anticipations were he has told us in three letters, published in the *Western Christian Advocate*. His views as to the utter futility of describing the cañon are given in the following excerpt from one of his letters:

As to the most graphic and ambitious word-painting I have seen, designed to be illustrative of this magnificent vision, I have only to say that, as a portraiture, it bears to the reality about the same relation that the printed concert program, carried home in one's hand, holds to the soulful rendering of the divinest conceptions of the masters. To be freed at once from this chief burden of my undertaking, and at the same time obtain pardon of myself for my confessed complacency before I had looked upon this matchless scene, let me write it down in all humility that no words or symbols of man's devising, no brush of his wielding or colors of his blending, can translate what God has here written. To any unbrutalized soul this revelation must be overpowering; to the refined intelligence overwhelming. The devout it fills with an amazement of rapturous awe. Hidden, like Moses, in the cleft of the rock, one sees God's glory passing by.

But, regarded simply as a physical phenomenon, I do not see how any sane person could attempt a description of it. How can any artist reproduce miles upon miles of gorgeous coloring, whose miraculous blendings are changing under every shifting of the light? How paint splendors that quiver in perpetual transformations? How describe abysmal depths, that now appear to be sinking, sinking, sinking betwixt their towering, turreted, spectral walls, the while dropping, dropping the narrowing river held in their embrace, till it seems to have been frightened into motionless silence — and then just as it is entombed in a sepulcher of rare mosaic, those same depths begin to glow again with living colors, and by some latent power of illumined space to thrust apart the rims of the awful chasm that closes them in, revealing its sides splashed with gorgeous tints that presently blaze from crag and flash from turret; the silent, buried river meanwhile rising from its swooning, and its emerald mingles with the blazing hues of the glorified formation. How paint such a vision, where relatives, proportions, lights, shades, tints, and, finally, perspective, are absolutely unmanageable! One writer says: "It is as if the most glorious sunset one ever saw had been caught and held in that awful, resplendent gorge." I can understand his "awful" and "resplendent," but what artist ever painted a sunset? With every second of time the effect changes, and before the brush can translate one entrancing combination a new glory of sky and cloud is ravishing his soul. No two sunsets are alike. Each is a series of glories. To-day's canvas can not be finished with to-morrow's brush.

So Yellowstone Cañon is never twice the same. It is an abyss of transitional splendors. One glance by daylight or moonlight from any accessible point and that vision is gone, to be not again exactly duplicated. One may generalize, may differentiate this from all other cañons, or paint fragmentary studies — that is all. No man can make plain to another's understanding what he himself does not apprehend. Entranced amazement is not apprehension, any more than rapturous worship is comprehension.

This miraculous vision can not be apprehended, as God can not be comprehended. No artist can paint the sea that engulfs him.

If we can not hope to do justice to the marvelous scene, we may perhaps be privileged to make a few statements and give a few impressions regarding it.

There are several key or vantage points along the cañon accessible to tourists. These are at the head of the Lower or Greater Fall, at Lookout Point, Grand View, and Inspiration Point. Lookout Point is the first commanding position on the brink of the cañon, near the hotel. Both Lookout and Inspiration Points are shelf projections of vertical rock, advanced somewhat into the gorge. They are railed off for the protection and convenience of tourists.

Leaning upon the railing at Lookout Point, what do we see? Two yellow, flaring walls, and in their midst a waterfall 300 feet high. Upon each wall is an infinitude of monuments, needles, towers. Here and there a razor-like precipice thrusts itself above the slope.

Over by the roadway the wall is white and crumbly, seamed, punctured, and weathered by time. Below, at its base, the slope is composed of marbled, powdery material, worn from the walls by the storms and disintegration of a century. Here a stunted tree sways in the wind, there a cave gaps from the wall. The walls are quite different. One wall is built up of large buttresses, which are in turn supported by smaller buttresses. The other is flaring, having wide areas of smooth, disintegrated granules of rock.

The action of the water is seen on all sides. Between the buttresses, and among the spires and obelisks which adorn the walls, are channels or slides formed and worn almost smooth by the swiftly descending streams after storms.

Far below me and well down in the cañon and overhanging the water is a conspicuous object. It is a blood-red obeliskine rock, or finger, in a white and yellow sea. I climb down to it, working my way along a trail at the side of a ravine, where thousands have preceded me. I reach the upper base of it. Carefully I climb up its rugged side, planting my feet in the crevices and seams and clinging with my hands to protuberant knuckles of rock. I can almost reach its sharp tip, but the wind is blowing strong, making the ascent rather dangerous, and, as I am alone, I content myself with hanging on to the rock and overlooking, for a time, the river. Then I descend, scramble around to the lower base, and sit down.

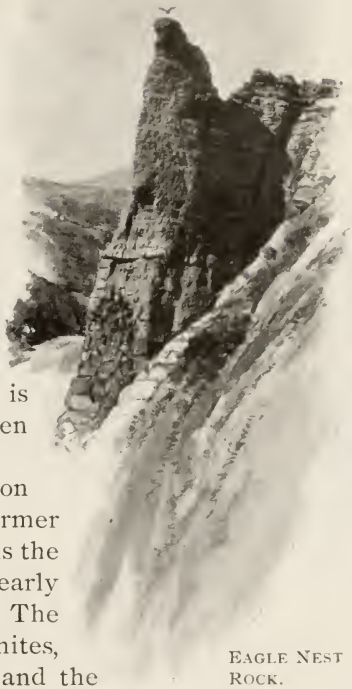
Log Cabin Studio,
Upper Geyser Basin.

I am now about on a line with the edge of the Lower Fall. It goes pouring over the brink in never-ending volume. Its hol-

low, sepulchral roar comes to me as music, a deep-toned diapason varied in expression by the wind. I enjoy watching the movement of the mist as it is swayed by the latter. The wind plays with it. Now it sends dense masses over against the farther wall; again, it lifts it high up, even to the cañon's brink, whence it goes ricochetting along the walls; now it drives it headlong down the gorge, and for a time I sit enveloped in its clammy folds; then it is beaten down to the river bed, where it expands and hides the river from view. What a sight! What a place! The fall roars, the sound rolls through the gorge, the wind blows. It is never quiet here; it is always sounding, sounding.

The water of the fall as it jumps into the abyss is torn into tiny crystals. At the bottom it is furiously churned.

Here at the foot of this old rock is a wonderful spot to be impressed by nature, especially if one is alone and the mind and emotions can be given full play.



EAGLE NEST ROCK.

The views from Grand View and Inspiration Point are the antithesis of each other. The former is but a short distance beyond Lookout Point, and is the point at which the cañon suddenly expands into nearly or quite twice the width that it has above there. The play of color is astonishing. The reds, yellows, whites, lavenders, grays, etc., are there in full strength, and the effect may be imagined. The reds and yellows are the predominant colors, and, when the walls are flooded with sunshine, one can be forgiven for at times imagining, almost, that he is gazing at a great conflagration.

From Inspiration Point, in looking up the cañon, one looks across the same expanse seen from Grand View. In addition, the Lower Fall is embraced in the picture. It appears small now, very different from the sight of it at Lookout Point, but perhaps it is all the more interesting because of that.

Below Inspiration Point, and passed by the tourist before reaching there, is a unique spot known as Castle Ruins. Here the yellows run riot. Erosion also has done some amazing chiseling, and between the sculpturing and the painting by Father Time found at Castle Ruins, the place is one of the most interesting in the cañon.

It is entirely practicable and safe for tourists to climb down and into

the cañon, if they use discretion. There are many places at and beyond Grand View where this may be done, but in the localities about Lookout and Inspiration Points it is dangerous to attempt it.

From the hotel at the cañon an easy trail leads to the Lower Fall. A platform and railing enables one to stand there and watch the water pour over the brink into the gorge below. It is a great cataract, and the sound of its falling waters will be with one long after he has stood beside it. In the quiet of the night one can hear its muffled roar from his room at the hotel.

A half mile above the Lower Fall is the Upper Fall. The Lower Fall is 308 feet high, whereas the Upper Fall is but 109 feet in height The only point of resemblance between them is that they are waterfalls. The setting of each is very different.

What a rare combination is found here! Two splendid falls and a magnificent cañon! If any one of them were found disassociated from the others it would be considered a privilege to see it. How much more to be appreciated, then, when the three are found in conjunction!

If one were to remain a week at the Grand Cañon he could find some new scene to inspire him each day. The cañon varies greatly under different degrees of sunshine and shadow. It will bear study and inspection, and well repays the tourist for the time spent in strolling along its flaming Gothic walls.

GOING TO THE PARK.

A year ago, in the parlors of the Hotel Aberdeen, St. Paul, I talked for an hour with a party of tourists from Ohio, bound for Yellowstone Park. They knew, in a general way, about the Park and its peculiar attractions. What they wanted to know, the questions they asked, bore upon the minutiæ of the trip, so to speak — the thousand and one little things that occurred daily in making the grand tour.

The only railway reaching the Park is the Northern Pacific. At Livingston, Mont., 1,007 miles west of St. Paul, and 1,049 miles east of Portland, the branch line—fifty-one miles in length—to the Park diverges from the main line. The through transcontinental train leaves St. Paul at 1.30 P. M. each day, and at 10.30 P. M. the next day Livingston is reached. The east-bound train leaves Portland daily at 11.00 A. M., and reaches Livingston at 4.35 A. M. of the third day out. These trains

A Train of Park Coaches.

each carry a first-class Pullman sleeping-car for the especial accommodation of Park travel. At Livingston these cars are detached from the through trains, and attached to the Park train, which leaves for Cinnabar, the terminus at the Park boundary, after breakfast, each day, at 8.30 A. M. It will thus be seen that the occupants of the first-class sleeping-cars are not disturbed at Livingston when the through trains reach there.

A few days — a week, if possible — before starting for the Park, one should either write or telegraph to the passenger department of the Northern Pacific at St. Paul or at Portland, asking for such berth reservations as are desired. This will make certain the fact that sleeping accommodations will be found awaiting one's arrival at St. Paul, Duluth, or at Portland. The price of a double berth in a first-class sleeping-car between St. Paul or Duluth and Cinnabar, or between Portland and Cinnabar, is $7 each way.

TETON RANGE.

MT. SHERIDAN AND YELLOWSTONE LAKE.

Attached to each train is a dining-car, so that meals can be obtained at regular hours. Breakfast and dinner cost $1 each; lunch is served *a la carte* — you pay for what you eat, and eat what you pay for.

WHEN TO GO.

The tourist season begins June 1st and ends October 1st of each year. That is to say, between those dates the Park hotels are open and the tourist coaches run. Before June 1st the roads are not in good condition, owing to snow, and spring washouts. After October 1st the weather grows too cold for comfort, and storms are liable to occur.

If one is able to go when one pleases, late June and early July would probably suit the majority of tourists best. But go anyhow, even if later in the season. The Grand Cañon is as effulgent, the Falls as majestic, Old Faithful as regular in its eruptions, Gibbon Cañon as glorious, Liberty Cap as faithful a sentinel, Golden Gate as yellow, and Electric Peak keeps as close watch over the Park in September as in June. The writer, on horseback, once enjoyed two weeks in the Park in September as much as he would had it been in July.

In going to the Park do not load yourself down with luggage. It is well to take a trunk to Mammoth Hot Springs, but leave it there. Dress warmly in good, serviceable clothing, and carry an extra suit for dinner and evening use at the hotels. A mackintosh and warm wrap, rubber overshoes, good and comfortable shoes and gloves, goggles, and a cap or hat that protects the face from the sun, are needed. Have the wraps in a shawl-strap, so that they will be at hand whenever a sudden rain or change in the weather makes them desirable.

MODES OF TRAVEL.

Beyond question the most desirable, most comfortable manner in which to see the Park is to use the regular stagecoach and hotel service. In this way the conveniences of the trip are magnified and the discomforts minimized. This tour is based upon the idea of the maximum amount of comfort and sight-seeing for the minimum amount of time and expense.

It must be remembered that the Park is far from the centers of population; that the tourist season lasts only four months, and that the expense of maintaining the hotels, lunch stations, and stagecoach equipment, including horses, drivers, etc., is very great. The Park is sixty-two miles long and fifty-four miles wide, mountainous and heavily timbered, and the winter snowfall is heavy. Manifestly, if one were to try to see everything it would require unlimited time and expense. The problem, then, is to arrange a tour that shall, within reasonable time, enable the tourist, at reasonable expense, to see the best and most important objects, so far as possible. To this end the hotels and lunch stations must be located at convenient distances apart, and where good water is procurable. The problem has been quite happily solved. Five and one-half days in the Park are required to do all this, and the expense is $49.50 from Livingston through the Park and return to that point, including all railroad and stagecoach fares and hotel bills. The mileage made in the Park tour is as follows:

First day, Livingston to Cinnabar, by rail, fifty-one miles; Cinnabar to Mammoth Hot Springs, by stagecoach, seven miles.

Second day, Mammoth Hot Springs to Lower Geyser Basin, by stagecoach, forty miles.

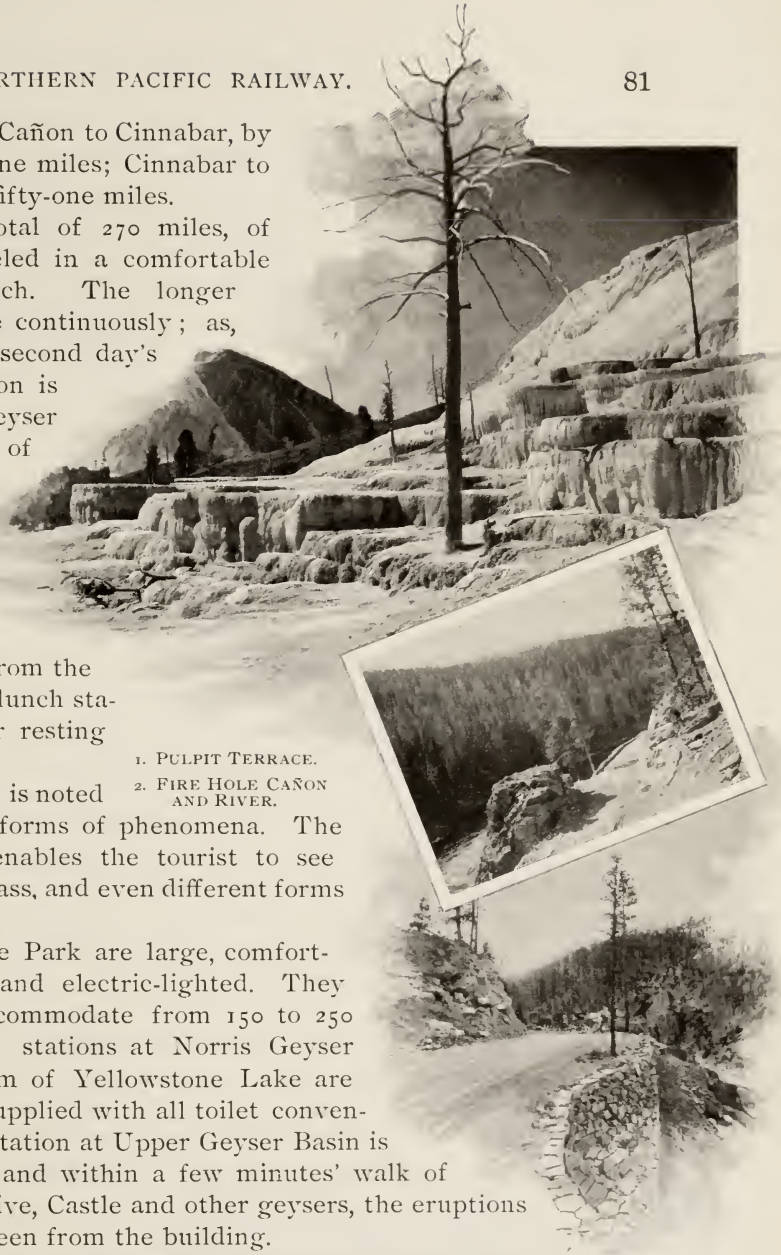
Third day, Lower Geyser Basin to Upper Geyser Basin and return, by stagecoach, eighteen miles.

Fourth day, Lower Geyser Basin to Yellowstone Lake Hotel, by stagecoach, forty-seven miles.

Fifth day, Yellowstone Lake Hotel to Grand Cañon, by stagecoach, seventeen miles.

Sixth day, Grand Cañon to Cinnabar, by stagecoach, thirty-nine miles; Cinnabar to Livingston, by rail, fifty-one miles.

This makes a total of 270 miles, of which 168 are traveled in a comfortable four-horse stagecoach. The longer drives are not made continuously; as, for example, on the second day's ride, the lunch-station is reached at Norris Geyser Basin at the end of twenty miles; on the fourth day lunch is eaten at the Yellowstone Lake lunch-station, twenty-eight miles from the starting point. The lunch stations thus serve for resting spots as well.



1. Pulpit Terrace.
2. Fire Hole Cañon and River.

Yellowstone Park is noted for several distinct forms of phenomena. The tour here outlined enables the tourist to see something of each class, and even different forms of the same class.

The hotels in the Park are large, comfortable, steam-heated and electric-lighted. They will each easily accommodate from 150 to 250 guests. The lunch stations at Norris Geyser Basin and West Arm of Yellowstone Lake are under canvas, and supplied with all toilet conveniences. The lunch station at Upper Geyser Basin is a wooden structure and within a few minutes' walk of Old Faithful, Bee Hive, Castle and other geysers, the eruptions from which can be seen from the building.

Gibbon Falls Lookout.

The stagecoaches seat from six to ten passengers each, are drawn by four steady horses, have experienced drivers, and are arranged for sight-seeing. Many of the drivers have driven in the Park for years and are familiar with every mile of road. It is entirely proper to ask them for information, or to have the coach stopped in order to get out to examine some interesting object. At many places, such as Apolli-

naris Spring, Beryl Spring, Gibbon Fall, Keppler Cascade, Mud Volcano, Crater Hills, Shoshone Point, Excelsior Geyser, etc., the coaches always stop for the tourists to look around.

In the regulations made by the United States Government concerning travel in the Park, the coaches of the Yellowstone Park Transportation Company are the only vehicles—except those owned by individual tourists—authorized to take passengers to the Park hotels. In the usual tour, stop-overs are allowed without additional charge, arrangements first having been made with the Transportation Company at Mammoth Hot Springs. Parties may arrange for a prolonged stay in the Park at a small additional expense for the retention of a particular coach.

BICYCLING.

The wheel is becoming a more prominent feature of Park travel yearly. One of the first bicyclists in the Park was young Lenz, in 1892, in the first stage of his round-the-world tour for *Outing*, which ended so disastrously for him when near its close. The writer walked with Lenz up the long hill leading to Mammoth Hot Springs, and afterward stood with him on Inspiration Point at the Grand Cañon. Together we snapped our cameras at the glorious scene below, above, and around us. Lenz enjoyed his trip in the Park and had few adverse criticisms to make on the feasibility of the wheel tour. Since then the roads have been improved immensely, hills have been eliminated through relocation of roads, and everything changed for the better. Now, wheels are an every-day sight at all points in the Park, many tandems being seen. Generally speaking, the roads are hard, smooth, free from stones, and the streams are bridged. Dainty lakelets and springs lie beside them; or they wind alongside trout-streams and near geysers and cascades. There are a few sandy stretches and some hills. When the Continental Divide is crossed, the wearied body forgets its ills in the almost transcendent scenes that greet the eye.

White mile-posts, with distances marked plainly, are found on all the roads. Sign-posts, placed at the roadside, indicate the presence of contiguous points of interest, hidden, perhaps, amid the foliage, such as springs of delicious drinking water or a rollicking cascade.

ON HORSEBACK.

For those devoted to horseback riding no method of transportation in the Park will equal it. Nearly all the advantages of the bicycle tour belong to this, and it has some that the wheel has not. A horse will carry one up a hill or over a steep trail, ford a stream where no bridge is found, and flounder through a mud-hole; a wheel will not! Detours may be made through trackless forests where blind trails are the only pathways;

where fallen timber obstructs, and where narrow steep-banked creeks must be jumped, and rocky places encountered. With a pack-train outfit and a good guide, farewell may occasionally be said to hotels and roads, and a plunge be made into the wilds — the role of explorer being added to that of sight-seer.

MADISON GRAYLING AND TROUT.

For the man or woman who can ride fairly well and who enjoys tent life and loves to be cuddled to nature's bosom, a horseback expedition in this region is an ideal outing. Of course, the usual tourist routes are open to such persons, but the remote portions of the Park are also accessible. The haunts where the elk, antelope, and deer seclude themselves can be penetrated. The tent can be pitched on the shores of a quiet lake nestling among high hills; beside a trout-stream seldom visited by bipeds; in the heart of the forest, where the wind croons sweet lullabies among the trees; or in some of the remoter geyser or hot-springs basins. Breaking away now and then from the hotels and roads, the big mountains can be climbed. The great Teton Range to the south of the Park boundary, with Jackson Lake mirroring its adamantine walls, is a standing invitation to the mountaineer to try conclusions with it.

In all these variations of the regular tour, the Transportation Company can be utilized. It is prepared to supply horses, guides, tents, and wagons for all sorts of outing parties, and at reasonable rates.

IN GENERAL.

At such places as the Lower and Upper Geyser basins and the Grand Cañon, the most comfortable way for the regular tourist, and for ladies particularly, to see the geysers and cañon is to use the tourist wagons at these points. The regular coaches convey passengers from hotel to hotel only. The wonders of the Upper Geyser Basin are extended over an area a mile and a half long and a mile wide. While for most people it is pleasurable exercise to walk slowly about these places, there are many to whom the tourist wagons are a great convenience.

YELLOWSTONE PARK STAGECOACH.

Side-trips for tourists who stop at the hotels are numerous. From the Fountain or Yellowstone Lake hotels, one can make trips to Jackson Lake

and the Teton Range south of the Park; to Shoshone and Lewis lakes, or down the Madison River. From the Yellowstone Lake and Cañon hotels there are many varied trips. Hayden Valley is a beautiful spot to explore; the Natural Bridge, the Pelican Creek Country, and the shores of Yellowstone Lake are points of interest. From the Cañon Hotel the ascent of Mount Washburn — 10,000 feet high — is the particular side-trip taken by tourists. A good trail leads to the summit, and one can ride a horse to the top.

Trouting excursions can be made from any of the hotels. Nearly all the Park streams have trout in them. Even among the geysers, where the water is warm, trout are found. Yellowstone Lake is full of trout.

Hotel rates are $4 per day for the first seven days, and $3 per day thereafter. Those who desire to remain in the Park for a month or more, can, by writing to the Park Association at Mammoth Hot Springs, obtain a special rate.

THE ASCENT of Mount Rainier during the summer of 1897 by a large company, the Mazama Club of Portland, Ore., and their guests, has attracted attention to this higher and better form of outdoor recreation. Mountaineering ought to become more of a national trait with us. Properly practiced, there is little of either real danger or fatigue in it.

Our highest peaks — those which are climbed or seen from "turret to foundation stone" — are found on the North Pacific Coast. Some of the Colorado mountains — and royal old fellows they are — are as high, but before they are reached one has already ascended, perhaps while sitting in a Pullman car, several thousand feet. On the North Pacific Coast it is far different. Rainier, Hood, Adams, Baker, Shasta, each and every one of them is climbed from its very base, and the result is that 12,000 or 14,000 feet of elevation means just that, and the mountaineer ascends every foot of those distances. More than this, the northwestern mountains are covered with ice. They are the Alps of the United States. There are to be found our Blanc, Jungfrau, Matterhorn, etc. The scenery is Alpine, the flowers are Alpine, the streams are Alpine, everything is Alpine.

If it be objected that one's ambition does not lead to the ascent of high mountains, I reply that a mountain outing does not necessarily include it. Nearly all the high snow-peaks in the Puget Sound and Oregon country spring from a region that can not be surpassed for camping and outing purposes. The ascent of the peak itself may or may not be attempted, as one's inclination prompts. I purpose to give here a portion of some experiences, with the ascent of the peak left out, of an outing in Paradise Park, on the southern slope of Mount Rainier, during the summer of 1894.

MT. RAINIER.
PARADISE PARK.

Paradise Park is a wild, rolling, irregular region of from 4,500 to 5,500 feet elevation above the sea level. It is literally in the midst of the mountains. Snow-banks, green knolls, clumps of evergreen trees, falls, rivulets, glaciers, glacial streams, and flowers are a few of its attractive features. The flora seen there is astonishing. There have already been found 400 varieties of flowers, and the end is not yet. In some spots the flowers grow so thickly as to fairly form a carpet. It may be of white, or of scarlet, or of purple, or it may be one of varied hues.

The usual place to camp is at or near Camp of the Clouds. One may camp at any spot, as suits the fancy. From every point the view is on a large and grand scale. To the north, Rainier itself rises, white, high, massive, and ever and anon the boom of the avalanche reaches the ear. To the southward, the Tatoosh, a serrated and remarkable range in many respects, seems to reach nearly as far heavenward as does Rainier. The snow patches and tree clumps form great splotches upon the landscape. The park comprises many thousands of acres, and is conveniently reached by stage from Tacoma via Longmire Springs, sixty-eight miles distant, and either afoot or on horseback, from Longmire's, a distance of six miles.

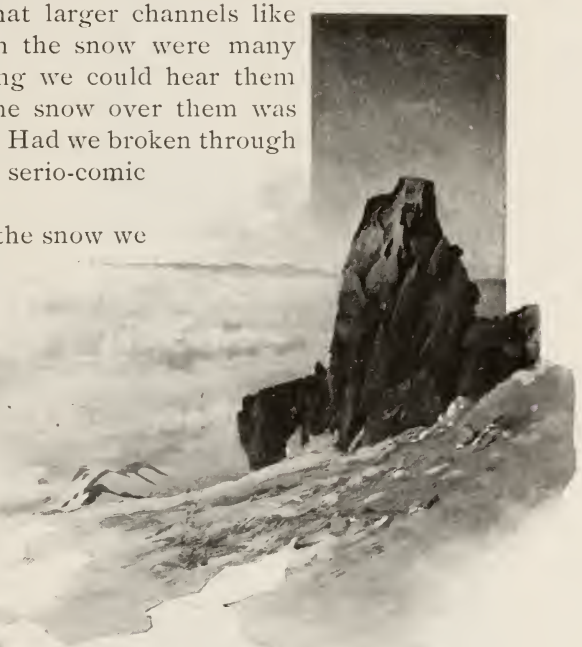
The days are pleasant, the nights quite cool and sometimes *cold*.

Two or three days after we had established our camp three of us set

out across a wide snow slope to visit Paradise Glacier and Sluiskin Fall. The latter was in plain view from our camp, and when the wind was favorable we could hear the muffled roar of its waters.

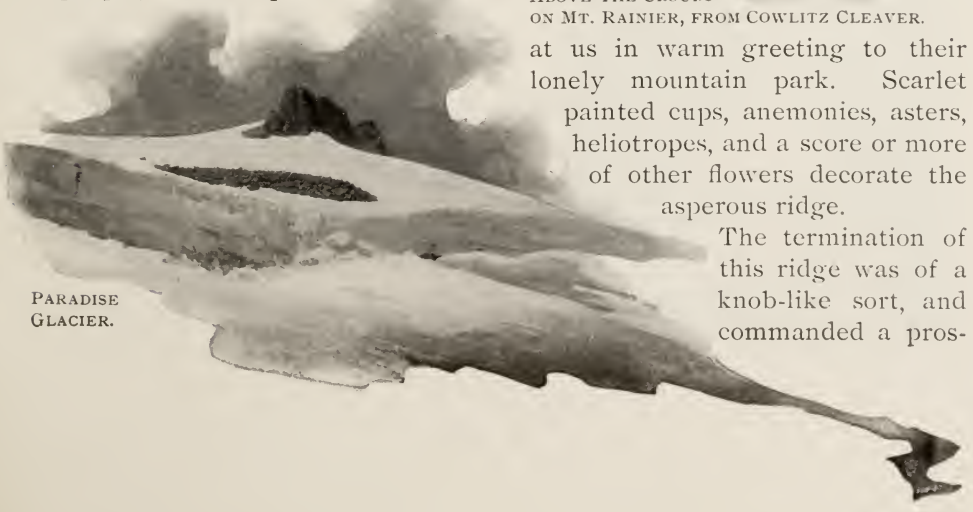
We started upon our tramp at 8 o'clock A. M. Our route led us at first over ridges and depressions where snow and rock alternated. We then reached a wide, semi-circular snow-field that sloped down to the Paradise River. It was bordered at its upper side by a line of cliffs over which small streams cascaded, burying themselves in the snow at the base of the cliffs. The snow was soft, and we sank into it an inch or two at each step. Its surface was seamed with tiny drainage channels which radiated upward from other and somewhat larger channels like the sticks of a fan. Underneath the snow were many rivulets, and as we trudged along we could hear them rushing swiftly beneath us. The snow over them was hard enough to bear our weight. Had we broken through it might have been fraught with serio-comic consequences.

After an hour's tramp across the snow we climbed a ridge. There we stumbled upon a flower garden — one of nature's wild mountain gardens. Beautiful flowers, modest, pure, grown not in a hot-house, but where the cold air from the snow and glacier breathed upon them. They lie close to the ground, and as we mount the crest they gleefully shake their white, yellow, blue, purple, and red petals at us in warm greeting to their lonely mountain park. Scarlet painted cups, anemonies, asters, heliotropes, and a score or more of other flowers decorate the asperous ridge.



ABOVE THE CLOUDS
ON MT. RAINIER, FROM COWLITZ CLEAVER.

The termination of this ridge was of a knob-like sort, and commanded a pros-



PARADISE GLACIER.

pect so wide, so splendid, so inspiring, that I named it Panoramic Point, and as such it should stand. There were higher points on the ridge, but its situation happened to be such that the view from it was simply superb. The knoll was rocky, with a few stunted pine trees and junipers scattered over it. On one side it gradually sloped down to Paradise Glacier, on the other it pitched abruptly down to the snow and ice 100 or more feet below.

At our feet, hundreds of feet below us, the Paradise River scurried away, now in a tunnel of snow, now in sunshine, toward the Tatoosh Range. The great ridges and hills, plains and cañons, timber areas and snow fields of the park, stood out like the letters on the printed page.

In one direction we can see far down the gorge of the Nesqually River, and in the deep blue beyond can discern the outlines of the distant mountains. Toward the east we can follow the line of cliffs that forms the eastern side of the Cowlitz River running southeasterly. Peak Success, the southernmost peak of the tri-peaked summit of Mount Rainier, looms up behind us, calm, white, and stately, kissed by the thin, fleece-like clouds, frayed edges of a vast body of them that slowly and sedately comes pushing up from the Nesqually gorge. The cracked ice cliffs and crevasses gleam faintly through the misty veil. Ah! but there is still more.

Away to the left — the southeast — far, far beyond the Cowlitz bluffs, rises a gigantic white dome. It forms a magnificent white island in the ether round about it. It is one of the family of great mountains of the region — Mount Adams.

And again — this time to the southwest — our eyes trace the outlines of a sharp, high, white peak. As the clouds break, it bursts full on the vision and Mount St. Helens stands revealed in its grandeur and symmetry. And is this all? Not so, not so. Quick! — look toward the south, far down across the Tatoosh, where the masses of vapor that override us "half conceal, half disclose." For an instant only, like a half-remembered dream, there faintly pierces the mists of heaven another white, sharp, cone-like shape. It is the peerless Hood, and to-day it is ether-realized. It is but a vision, but it is Hood itself. Think of it! On the flanks of Rainier, the giant of mountains, to see at the same time St. Helens, Hood, and Adams! Isn't it truly Panoramic Point upon which we stand?

But I wish to direct attention to another thing. Just across the park, so near that it seems as if one could lay the hand upon it, rises the Tatoosh Range. From wherever it is seen it commands admiration. Indeed, it divides attention with Rainier itself. The truth is, that if the Tatoosh were not there one-half the grandeur and beauty of the region would be gone. But from Panoramic Point the Tatoosh stands out as

from nowhere else. The Point is just at the right distance from the range and at just the proper elevation to see it to greatest advantage. From Camp of the Stars, Gibraltar Rock, or from the summit of Rainier, we are too high and the range appears flattened. But from where we now stand it forms a setting complete in itself. The range is from six to ten miles long and we see the whole of it. Its sides, of black volcanic rock, are very steep, and the snow lies upon them in deep, irregular masses, strangely configured. The summit is a serrated, wavy one, notched into pyramidal, turreted, castellated, jagged peaks of various sizes. At some places the snow extends almost from the tip of one of the summit's tooth-like peaks clear down to the Paradise River. At others it is piled in deep, heavy banks which never melt. Toward the upper end of the range, and far below the crest line, lies Reflection Lake. It is at the base, apparently, of one cliff, and appears to almost hang upon the edge of another.

The slopes of the Tatoosh are heavily fringed with timber, and many lakes are found slumbering in the heart of the forest.

Leaving Panoramic Point we glissade down a snow cliff, using our alpenstocks to preserve equilibrium, cross Paradise Glacier, and move on a few hundred feet to Sluiskin Fall. We are only about a mile from camp in direct line, but we have tramped between two and three miles to reach the spot.

The stream issues from Paradise Glacier, and pitches down through a narrow, dark cañon, foaming and roar-

SLUISKIN FALL, PARADISE PARK.

ing, to the edge, where it leaps down from twenty to thirty feet to the embraces of a mass of snow and ice, where it disappears from view.

From the time the water issues from the snow above the ravine to the time it dives out of sight into the snow at the foot of the fall, it makes noise and fuss enough almost for a small Niagara.

It was named after Sluiskin, an Indian, who guided Van Trump of Yelm, Wash., and Stevens of Boston, on their ascent of Mount Rainier in 1870, the first time that white men ever stood upon the real summit.

We ate lunch among the trees above the cañon, watched a marmot scurry across the snow to his hole in the timber, heard the cries of many more, and then retraced our steps to camp.

This little excursion is one of many that may be made within the confines of Paradise Park. In no case does hard or dangerous climbing form a part of it. There are many lakes, falls, and glaciers far and near, and flowers are found everywhere

THE PAGES of history are sometimes unrolled with startling rapidity. A sudden war, the climax of long-continued aggressions almost unseen by the world at large ; a revolution, the culmination of political intrigue, silently but effectively carried on ; a discovery of treasure, where none was before suspected to exist, will apparently turn the world, in whole or in part, topsy turvy, and make history faster than reliable historians can record it. The latest instance of this is found Alaskaward, on a creek, Klondike, so-called.

For years a vague idea has prevailed that there was such a region as Alaska, a land of vast dimensions, huge crops of ice, tremendous glaciers, the most glorious scenery on earth, a few Indians, and high mountains. It was, however, to most of us a sort of intangible country.

The dream has suddenly become startlingly real. A discovery of gold in the frozen bed of an arctic creek, so far from civilized communities that the news of it was a year in reaching them, has stirred the world to its depths. A stampede from remotest parts of the world is in progress to the frozen North. The old missionary hymn, slightly changed, fits the case exactly :

Each breeze that sweeps the ocean
Brings tidings from afar,
Of nations in commotion
Prepared for Klondike ore.

Within the space of a few months we have learned more about Alaska and contiguous territory than in a century before. Every man who ever visited Alaska, many of those who have thought they did, and a small army of those who *never did*, has written either a book or a newspaper or magazine article on the subject. Out of this mass of — much of it — poor

writing and uncertain statement, it is not always easy to sift the wheat from the chaff. There have been, however, a good many kernels of good grain winnowed, and our real knowledge of this region has been greatly advanced.

The great ice-box of the country is found to be something more than a refrigerator and breeder of icebergs. The recent discoveries of ore were not, however, in American Alaska, but in the Canadian Northwest Territory. This fact has emphasized the importance of the boundary lines in that region. The line between Alaska and the Northwest Territory follows the 141st meridian from Mount St. Elias to the Arctic Ocean. This line is accurately established and marked on the Pacific Coast, and on the Yukon and Porcupine rivers in the interior. The international boundary between the United States and British Columbia follows an irregular line from Mount St. Elias southward to Portland Canal on the 56th parallel of latitude. This is the line which Britain or Canada disputes. As at present maintained, it places Chilkat, Tai-ya (Dyea), Skagway, Juneau, Wrangel, etc., in American territory. If the Canadian contention is ever allowed, the first-named three places will find themselves in Canadian territory.

STEAMER OFF FOR KLONDIKE PORTS.

Accurate knowledge of this region has not, until recently, been easily obtained. Since the Klondike discoveries, Government reports, a few magazine articles of reliability, and interviews with reputable and reliable persons have disseminated valuable information, not to the few, but to the world.

STEAMER CITY OF SEATTLE.

The reports of Mr. Wm. Ogilvie, the Canadian Dominion surveyor, and a man of thoroughly trustworthy and of conservative opinions, are of great value. Prof. George Davidson, for many years in charge of the U. S. Coast Survey work on the Pacific Coast, in an article in the *Overland Monthly* for November, 1897, gives, succinctly, a great deal of information.

GENERAL VIEW OF SITKA FROM BARANOFF CASTLE.

Extended explorations and surveys on either side of the boundary line have been comparatively few, and maps, generally, are necessarily inaccurate and uncertain in many particulars. Especially will this be noticed as regards nomenclature.

Professor Davidson gives the area of Alaska, including islands, as 579,000 square miles, or one-fifth the area of the rest of the United States, and equal to the area of France, Germany, Great Britain, Ireland, Belgium, and the Netherlands combined.

Alaska cost us $7,200,000, and Professor Davidson figures that it has returned to us nearly $114,000,000 to date, a fair profit on the investment, certainly.

The discovery of gold in this region is no new thing. The Russians knew of the gold placers, and, it is said, suppressed the knowledge, even

PINNACLE RANGE FROM SITKA.

to the extent of punishing those who made known the fact. The Hudson's Bay Company knew of the gold discoveries, and Americans were aware of the presence of gold long before the seventies. Naturally,

the first discoveries may have been upon the coast, but adventurous spirits of the gold-hunter sort are very soon impelled to push back into the mountains where the streams head, and where they know the richest placers are usually found.

The isolated character of the land, the long and severe winters and short summers, the irregularity and infrequency of the visits of steamers and sailing craft, all of which made prospecting slow and expensive, prevented, in those early days, systematic and continuous exploration. The Treadwell Mine, near Juneau, a low-grade proposition purchased from a miner for the sum of $400, and which has been yielding continuously $70,000 or $80,000 per month, stood as a standing encouragement to those of dauntless spirit and strong physique.

KLONDIKERS ON STEAMER CITY OF KINGSTON.

The topography of the country merits attention. And here let it be remarked that, while an imaginary boundary line divides the country into two portions, there is no natural line of demarkation, in a physical sense. Alaska or Canada, Klondike or Copper River, Dawson City or Circle City, it is much the same everywhere.

The pronounced topographical feature of the region is the Yukon River. This tremendous stream has cut a channel through the very heart of the country. The river, through all its meanderings to its extreme headwaters, will measure close to 2,500 miles. Its tributaries measure 3,000 miles, according to good authority, and its drainage area is 300,000 square miles. Its sources are literally in all portions of Alaska and Northwest Territory. Its more remote sources are in the rivers and lakes just over the coast ranges of mountains along the Pacific Coast, that have become so familiar in connection with the various routes to the Klondike and interior of Alaska. In its lower courses the river is from eight to twenty miles wide; at the mouth of the Pelly River it is three-quarters of a mile wide. The larger portion of the greater river is navigable for steamers having a draft of four or four and a half feet. The upper river and many of the tributaries can be navigated by boats of very light draft.

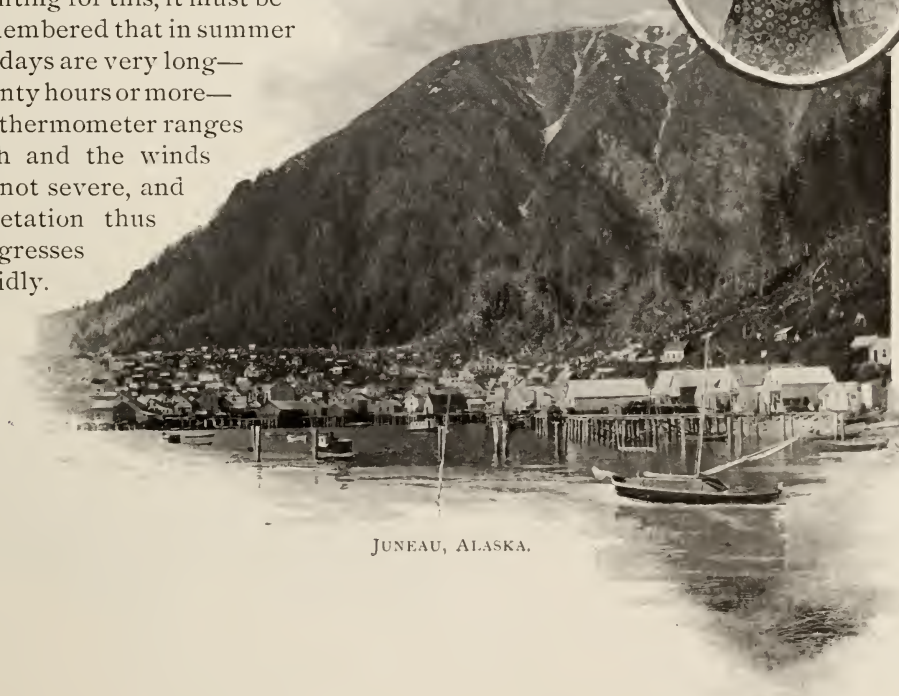
The principal tributaries of the Yukon are the Koyukuk, Tanana, Porcupine, White, Pelly, and Lewes rivers. At the present time the Klondike River or creek is the best known. The waters of the Yukon teem with fish life. The salmon is the most valuable fish found for food

purposes. These fishes frequent the upper waters of the river as high as Forty Mile and Klondike rivers. The river both freezes and opens first on the headwaters. Navigation opens about July 1st—occasionally a little earlier—and closes from September 15th to October 1st, making the season of navigation a short one.

The country is mountainous, with apparently but limited amounts of valley land. In the interior there appear to be extended areas of swamp land. The ground is perpetually frozen to a great depth and is covered with a growth of moss peculiar to the region. Beneath this moss ice will be found.

Traveling and prospecting is very hard work. With the influx of miners, prospectors, and the necessary tradesmen, etc., it is reasonable to suppose that present conditions of life and travel will become easier from year to year. If the mining interests develop as now it seems likely they will, transportation facilities will be provided that will radically affect the region in all respects. The country is fairly well supplied with dwarfed timber suitable for fuel, cabin building, and general mining purposes, and coal is found in quantity. Strange to relate, in this frigid region, out of this frozen soil, the profusion and coloring of flowers and the variety and quantity of berry bushes growing is almost unbelievable. As partially, at least, accounting for this, it must be remembered that in summer the days are very long—twenty hours or more—the thermometer ranges high and the winds are not severe, and vegetation thus progresses rapidly.

An Alaskan Belle.



Juneau, Alaska.

The agricultural possibilities of the Alaskan interior are scarcely known as yet. What seem to be reliable accounts indicate that in this respect the country is entitled to considerable credit. The conditions are peculiar, and crops, as well as men, must accommodate themselves to them, and apparently do so.

I have referred to berries The plenteousness of them is surprising. Alaskan cranberries are a delicacy in the Pacific Coast markets. Blueberries, huckleberries, wild strawberries, raspberries, gooseberries, dewberries, red and black currants, all grow luxuriantly, as do others indigenous to the country. Oats and wheat, rye and barley, ripen in the Yukon Valley, and there are many and good varieties of grasses. Vegetables are somewhat uncertain. Cabbages and potatoes do not grow well. Lettuce, radishes, and turnips are produced successfully. While the summer and growing season lasts vegetation moves onward with tremendous strides. In many cases, however, the season is too short to mature the seeds after the plant has attained its growth, and new seeds must be imported for each season's planting.

In the Alaska Coast region, where the climate is mild and precipitation great, all root crops, including potatoes, grow prolifically.

There is undoubtedly a good field in Alaska for agricultural experiment work.

The native inhabitants of Alaska are Indians of many and unpronounceable tribal names. Whatever of savagery may have once possessed them, they are now — unless, possibly, in rare cases among some of the interior tribes — through contact with the whites, and especially the missionaries, docile and friendly. Indeed, in the rush to the Klondike and other portions of the interior, these Indians have been indispensable in packing miners' outfits and supplies across the mountain passes. They scale the roughest cliffs with huge, cumbersome packs, weighing from 50 to 75 pounds for boys and squaws, and from 150 to 200 pounds for the stronger men.

The climate of the coast is markedly different from that of the interior. The precipitation on the coast is excessive, being at Sitka, in latitude 57°, eighty-seven inches, and at Wrangel, a little lower down the coast, sixty inches per annum. In the interior the rainfall is only about one-third or one-half that on the coast. The reason for this is the influence of the Kuro-Siwo, or Japan current of warm water, a Pacific Ocean gulf stream in reality, upon the coast side of the mountains. This stream flows across the ocean northeastwardly from Japan, impinging upon the Aleutian Islands portion of Alaska, whence it is deflected down the coast to California, and finally loses itself in the broad bosom of the Pacific Ocean. The temperatures of the coast are moderate and pleasant.

In the interior the temperature ranges from 100° Fahrenheit above zero in summer, to 65° and 70°, and at times and places 75° below zero in winter.

The facts here presented will show that a great variety in all respects is found in this hitherto isolated region.

The adventurer need not necessarily incur the unquestioned hardships of a search for gold in the interior. The streams and sands along the coast have for years been yielding up the yellow metal to those who sought for it. If the coast placers have not proved Klondikes neither have life and labor been so hard pushed in the effort to find them. The old race between the tortoise and the hare may well be pondered in this connection.

The actual first discovery of gold always provokes discussion. Now that everybody can find gold in the Klondike or Yukon region, the magazines and press are full of the question as to who did really first find the metal, both in the Yukon Valley, as a whole, and the Klondike region in particular.

Since the world became afflicted with Klondicitis, the *Overland Monthly*, published in California, has given particular attention to the subject. In the October number, W. R. Quinan gives the credit for the first discovery in the Yukon Valley to one John Holt, in the year 1875, presumably near Lake Tagish. As Dr. Dall and Whymper explored the

1. Top of Muir Glacier.

2. The Alaskan Forest.

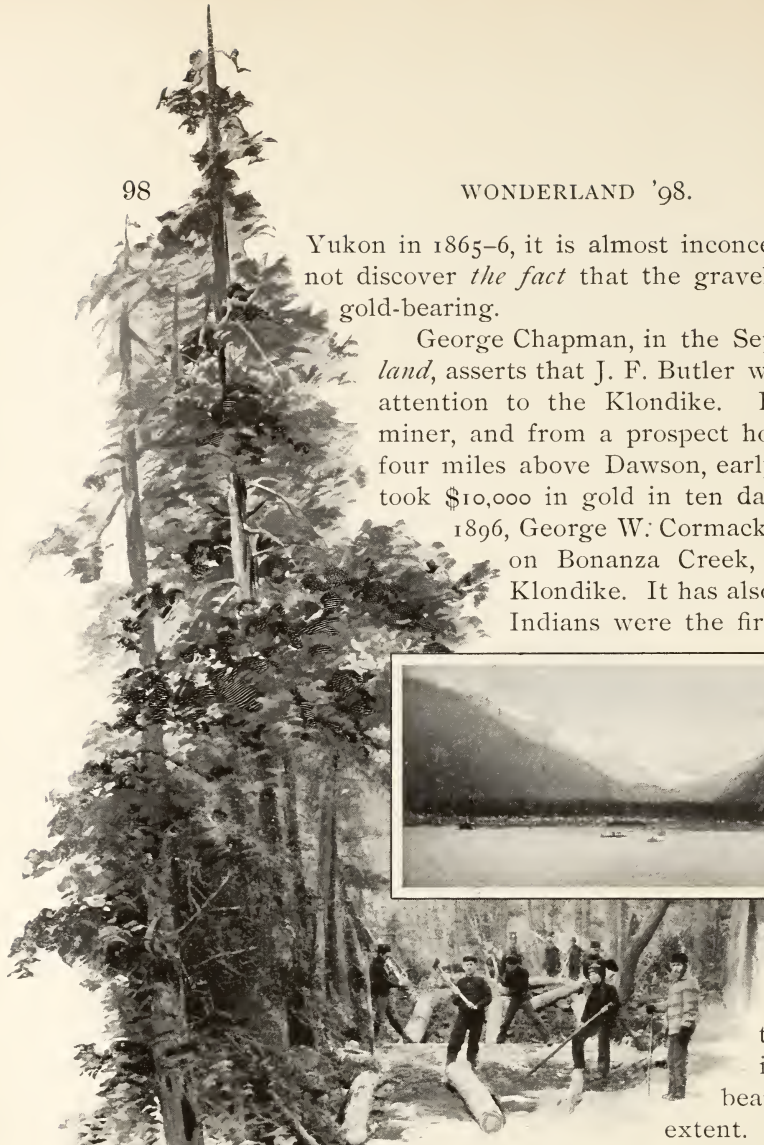
3. Floating Ice, Glacier Bay.

4. Chief Kodoshan's Totems, Fort Wrangel.

Yukon in 1865–6, it is almost inconceivable that they did not discover *the fact* that the gravels of the stream were gold-bearing.

George Chapman, in the September (1897) *Overland*, asserts that J. F. Butler was the first to direct attention to the Klondike. He was a California miner, and from a prospect hole on the Klondike, four miles above Dawson, early in August, 1896, he took $10,000 in gold in ten days. On August 12, 1896, George W. Cormack made a great strike on Bonanza Creek, a tributary of the Klondike. It has also been stated that the Indians were the first to make known to white men the fact that the Klondike and its affluents were gold-bearing, at least to any extent.

VIEW OF SKAGWAY FROM STEAMER CITY OF KINGSTON.



CONSTRUCTION WORK ON SKAGWAY WAGON ROAD.

In July, 1897, the steamer Excelsior arrived at San Francisco, closely followed by the steamer Portland at Puget Sound, with news of the new discoveries. The latter steamer brought down at least $1,000,000 in gold, as $970,000 were actually shipped by the banks and express companies at Seattle to the United States mints. The enormous individual fortunes made in a few days, weeks, or months on the Klondike streams, have been given sufficient publicity without enumerating them here.

The Klondike may even now be said to belong to a past era, for the reason that long ago, before we even knew that there was any Klondike, every foot of ground in the region was staked and occupied. It were as useless, perhaps even more so, for the inflowing tides of humanity to the interior of Alaska and the Northwest Territory, to head for the imme-

diate vicinity of the Klondike streams as it would be to go to the placers of California — discovered fifty years ago — or to those of Montana, so thoroughly and successfully worked at a little later date. Those now en route to that region must go prepared to explore and uncover new Klondikes. This will prove a serious business, especially so for those unused to prospecting or mountaineering. To break away from the habitations and warm firesides of men, and plunge into an icy wilderness, working on frozen ground and in the cold waters of glacial streams, is no child's play even for the experienced prospector of temperate climes. That there are virgin fields where the golden nuggets are as thickly strewn upon the bed rock as they were at Klondike, is the universal testimony of all who are entitled to speak with authority. That they will be searched for and sooner or later discovered, is certain. Healthy men of strong physique, cheerful temperament, not predisposed to disease, ready to face hardship, discouragement, intense heat and poisonous insects in summer, and long nights and bitter cold in winter, can risk the effort. By suitably outfitting themselves and living properly, the strong man can successfully combat nature and overcome the obstacles she has placed in his way, and enjoy life there. The same is

SIX MILES UP DYEA TRAIL.

BURRO PACK TRAIN, DYEA POINT.

PORTAGE, LAKE BENNETT.

true of women. Each year will see the conditions of existence made easier.

There are various routes to the Klondike and Alaskan region. The longest and easiest is by steamer from North Pacific Coast ports via Unalaska to St. Michael, thence up the Yukon River, a total distance of about 4,450 miles to Dawson, and requiring twenty-nine days to make the voyage. Those using this route reach all the important points in the interior. The principal rivers of the country flow into the Yukon, and the principal towns — Weare, Fort Yukon, Circle, Fort Cudahy, Forty Mile, Dawson, Fort Selkirk, etc., are located upon that river.

The steamers on this route, both ocean and river, for the season of 1898, are expected to be perfectly adapted for the service.

There are many so-called overland routes, and new ones are being continually sprung upon an unsuspecting public.

It is probable that but three or four of them will stand the test of experience, and of these, three have their starting points at the head of Lynn Canal, nearly 1,000 miles north of Puget Sound. That the majority of the prospectors and explorers hitherto, as well as the Indians, have generally used the Chilkoot Pass, is a strong argument in favor of that route, hard as it is. The whistle of the locomotive now makes the echoes of Dyea Cañon. Where, heretofore, humanity has struggled along with aching legs and backs, staggering over the rocks of the pass, a steam tramway now "totes" both men and freight, landing them at Crater Lake on the other side. Thence the trip down the lakes and streams to the Yukon proper is made as heretofore, in boats. A railway from Dyea to Dyea Cañon, eight miles in length, connects with a steam aerial tramway across the summit, eight and a half miles long. The capacity of this line is 200 men and 120 tons of freight every twenty-four hours.

The Skagway trail via the White Pass is now also in good condition. A wagon road from Skagway to the summit of the pass has been constructed and is in successful operation. A tramway has also been built around White Rapid.

Transportation rates are reasonable and the exorbitant prices of 1897, when these routes became congested with miners, ceased when the year itself died.

From Chilkat, Pyramid Harbor, the Dalton trail reaches the Yukon River just below Five Finger Rapid and affords a satisfactory route across a low pass and over a country of easy grades, for those who prefer to travel with pack mules. This trail avoids entirely the obstacles of river navigation met with in using the Chilkoot and Skagway routes. It requires more time, however.

A route via Prince William Sound and Copper River — north of Dyea and Skagway — across the Valdes Pass, leads, it is said, not alone to the rich copper and gold fields on this river, but also to Dawson and the large affluent streams of the Yukon on the south side of the latter.

The distance from the North Pacific Coast ports to Dawson via the Chilkoot Pass is about 1,550 miles, requiring from twelve to fourteen days to accomplish it. If the Skagway trail is used, the distance is slightly greater. Where the Dalton trail is used the pack-train travel aggregates about 310 miles. In using the Skagway or Dyea trails, there are several portages and rapids encountered on the lakes and upper rivers. Those unaccustomed to river boating should on no account attempt to run the rapids, but, instead, make portages.

1. Crater Lake, Dyea Trail.
2. First Crossing, Dyea River.
3. Cañon on Dyea Trail.
4. Washing out Gold.

Mining in this region is beset with unusual difficulties. The ground being continually frozen, the usual explosive agents are useless. A system of thawing the ground is necessary. Thus far primitive methods have proved the best. Fires are built on the ground, thawing it thus a few inches; the gravel is shoveled out and the operation repeated until the shaft reaches bed rock. Drifting on the bed rock is carried on in the same manner. The accumulation is left on the dump until summer — the burning taking place in

winter — when it is washed out and the gold particles collected. The results are satisfactory, but more rapid methods of thawing the ground are hoped for in the future.

Other localities in the interior of this country toward which attention is being directed are the Teslin, Pelly, White, Indian, and Stewart rivers in Northwest Territory; Miller Creek, Forty and Sixty Mile creeks and others along the boundary; Tanana and Koyukuk rivers, Little Munook, Beaver and Birch creeks in Alaska.

Along the Alaska coast, the neighborhood of Cook Inlet and Prince William Sound is acquiring a greater reputation than it has heretofore held, although much gold has been mined there. The Klondike discoveries seem to have stimulated exploration on the coast. Unfortunately, reliable information regarding these coast fields is scarce. The Copper River country is attracting attention. This river flows into the ocean just south of Prince William Sound. Its headwaters are far back across the mountains. The river seems impossible of navigation near the coast, according to what seem the most trustworthy reports. Rapids and cañons beset it and the current is swift. It is claimed that the Styx Indians use a route overland from the coast that reaches Copper River at a point above the obstructions mentioned. This route leaves Valdes Bay, an arm of Prince William Sound, at Copper City, and, via the Valdes Pass, follows a good trail overland to the river. This route the Indians have used, so it is said, for many years, and for the season of 1898 we are promised a good complement of guides, well-built stations, and an improved trail.

Not only has gold been found in this region, but there are also large deposits of copper.

Steamers ply regularly between North Pacific Coast ports and the Prince William Sound ports.

It must be remembered, in considering life and work in the Alaskan regions, that, while the exactions are at present severe, each year will lessen them.

Siberia, a much larger and as cold a country, supports a population of several millions. There they have large towns and cities, with comfortable dwellings, and fine cathedrals and public buildings. When time enough has elapsed to allow the construction of good buildings, trails and roads, and persons are enabled to keep permanently occupied, life in interior Alaska will be divested of most of the uncomfortable and forbidding conditions that now attach to it.

"Given companionship, abundant occupation, regular habits, and abundant food, and the would-be citizens of Alaska have nothing more to fear from the darkness of the long winters than have the inhabitants of St. Petersburg, in latitude 60°, or of Archangel, on the White Sea, in

latitude 65°— farther north than Dawson — or of great numbers of the inhabitants of Norway and Sweden," as Mr. Stretch writes in the *Mining Journal*. With the rapid influx of population now promised, we may look to see existence in Alaska take on a somewhat more roseate hue than now, and also see this hitherto forgotten portion of our domain assume a position commensurate with its real value.

NORTHERN PACIFIC RAILWAY.

Rates and Arrangements for the Tourist Season of 1898.

MINNESOTA SUMMER RESORTS

During the summer season the Northern Pacific Railway will sell round-trip excursion tickets from St. Paul or Minneapolis to Glenwood (Lake Minnewaska) at $5.25; Battle Lake, $7.50; Fergus Falls, $7.50; Perham, $7.75; Detroit Lake, $9.15; Minnewaukan (Devil's Lake), $18.65; Winnipeg, $22.50. From Duluth to Deerwood, $3.80; Battle Lake, $7.50; Fergus Falls, $7.50; Perham, $7.75; Detroit Lake, $9.15; Minnewaukan, $18.65; Winnipeg, $22.50. From Ashland, Wis., to Battle Lake, $9; Fergus Falls, $9; Perham, $9.25; Detroit Lake, $10.65; Minnewaukan, $20.15; Winnipeg, $22.50. Good going to Minnesota resorts one day (from Ashland two days), to Minnewaukan (Devil's Lake) and Winnipeg two days from date of sale. Good to return on or before October 31st.

YELLOWSTONE PARK RATES

The Northern Pacific Railway will sell round-trip excursion tickets from May 29th to September 28th (both dates inclusive) at the following rates:

A $47.50 round-trip ticket, St. Paul, Minneapolis, or Duluth to Livingston, or Mammoth Hot Springs and return, returning same route, or via Billings to the Missouri River. These tickets are limited to thirty days going, ten days returning, final limit, forty days.

A $5 ticket, Livingston to Mammoth Hot Springs Hotel and return, including rail and stage transportation.

A $49.50 ticket, Livingston to Cinnabar and return, Cinnabar to Mammoth Hot Springs, Norris, Lower and Upper Geyser basins, Yellowstone Lake, Grand Cañon, and Falls of the Yellowstone and return, including rail and stage transportation, and five and one-half days' accommodations at the Association hotels.

The $5 and $49 50 tickets on sale at eastern and western termini between dates first named above, at Livingston May 31st to September 30th, both dates inclusive, are good if used in the Park any time between June 1st and October 6th, both dates inclusive, and do not require identification of purchaser.

By payment of $22 at Mammoth Hot Springs Hotel, to the cashier of the Yellowstone Park Association, and of $22.50 to the manager of the Yellowstone National Park Transportation Company, having his office in this hotel, tourists not provided with regular Park tickets can secure transportation and hotel accommodations for the regular five and one-half days' tour.

The hotel service in the Park is now very complete. Tourists can stop at any of the principal points of interest with the assurance that comfortable accommodations will be supplied them.

MONTANA AND EASTERN WASHINGTON POINTS

The Northern Pacific Railway has on sale, at greatly reduced rates, round-trip excursion tickets from St. Paul, Minneapolis, or Duluth to Billings, Springdale, Livingston, and Bozeman, Mont.; Helena and Butte, Mont. (choice of routes returning, via Northern Pacific or Great Northern Railway lines); Missoula, Mont.; Spokane, Wash. (choice of routes returning, via Oregon Railway & Navigation Company and its connections, or via the Great Northern, or Northern Pacific lines); Medical Lake, Pasco, Kennewick, and Toppenish, Wash.; Nelson, Trail, Rossland, Ainsworth, Kaslo, and Sandon, B. C.; and Coulee City, North Yakima, and Ellensburg, Wash.

These tickets are of iron-clad signature form; require identification of purchaser at return starting point.

Any of the above tickets may read to return via Billings to the Missouri River.

NORTH PACIFIC COAST EXCURSIONS

A $90 round-trip individual excursion ticket, St. Paul, Minneapolis, or Duluth to Tacoma, Portland, Seattle, New Whatcom, Vancouver, or Victoria, is on sale daily at points first named and by Eastern lines.

Tacoma, Seattle, New Whatcom, Victoria, Vancouver, or Portland tickets, at above rates, will be issued, going via Northern Pacific, returning via same route, or Great Northern, or Soo-Pacific to St. Paul, Minneapolis, or Duluth; or via Canadian Pacific to Winnipeg or Port Arthur; or via Billings to the Missouri River; Portland tickets will also be issued, returning via Oregon Railway & Navigation Company and its connections to either Omaha or Kansas City, or to St. Paul via Sioux City.

Above tickets limited to nine months from date of sale, good, going trip, sixty days to any one of North Pacific Coast termini named returning any time within final limit.

ALASKA EXCURSIONS

An excursion ticket will be sold from Eastern termini named to Sitka, Alaska, at $170, which rate includes meals and berth on the steamer. Tickets on sale May 1st to September 30th. Limit, nine months. Going to Tacoma, sixty days, returning within final limit, holder to leave Sitka on or before October 31st. Tickets will be issued to return either via the Northern Pacific, Soo-Pacific, or Great Northern lines to St. Paul or Minneapolis, or via Canadian Pacific Railway to Winnipeg or Port Arthur. Usual stop-over privileges granted. Steamer accommodations can be secured in advance by application to any of the agents named below. Diagrams of steamers at office of General Passenger Agent at St. Paul.

"TO THE WESTWARD"

The Alaska Commercial Company's steamer Dora will sail from Sitka to Unalaska, in Bering Sea, 1,300 miles distant, on or about the 1st of April, May, June, July, August, September, and October, stopping at Yakukat, Prince William's Sound, Cook's Inlet, Kodiak, Karluk, and Unga. Close connection is made with Pacific Coast Steamship Company's vessel City of Topeka at Sitka. The steamer Dora has accommodations for twenty-six cabin passengers. Round trip is made in from twenty-five to thirty days, three days of which time are spent at Unalaska. Round trip from Sitka, including berth and meals on boat, $120. (There is also steerage rate of $80 for round trip, there being accommodations for thirty-five passengers.)

CALIFORNIA EXCURSION RATES

The Northern Pacific Railway will sell round-trip excursion tickets from St. Paul, Minneapolis, or Duluth as follows:

To San Francisco, going via the Northern Pacific, Seattle, and steamer, or Portland and the Shasta Route, or the ocean to San Francisco; returning via rail or steamer to Portland, or via steamer to Seattle, and the Northern Pacific, Great Northern, or Soo-Pacific lines to St. Paul or Minneapolis; or via Canadian Pacific to Winnipeg or Port Arthur; or via Billings to the Missouri River; or via rail or steamer,

Portland and Huntington to the Missouri River; or returning by the southern lines to Council Bluffs, Omaha, Kansas City, Mineola, or Houston, at $103.50; to New Orleans or St. Louis, at $109.50.

To Los Angeles, going via Portland and Shasta Route, and returning via rail, Portland and the Northern Pacific, Great Northern, or Soo-Pacific lines to St. Paul or Minneapolis; or via Billings or Huntington to the Missouri River, at $122.50; or going via Portland and Shasta Route and returning via San Francisco and Ogden to Council Bluffs, Omaha, or Kansas City, at $113; to St. Louis, at $119.

To San Diego, going via Portland and rail through Los Angeles, and returning via rail, Portland and the Northern Pacific, Great Northern, or Soo-Pacific lines to St. Paul or Minneapolis; or via Canadian Pacific to Winnipeg or Port Arthur; or via Billings or Huntington to the Missouri River, at $129; or going via Portland and Shasta Route and returning via San Francisco and Ogden to Council Bluffs, Omaha, or Kansas City, at $119.50; to St. Louis at $125.50.

Tickets via ocean include meals and berth on steamer.

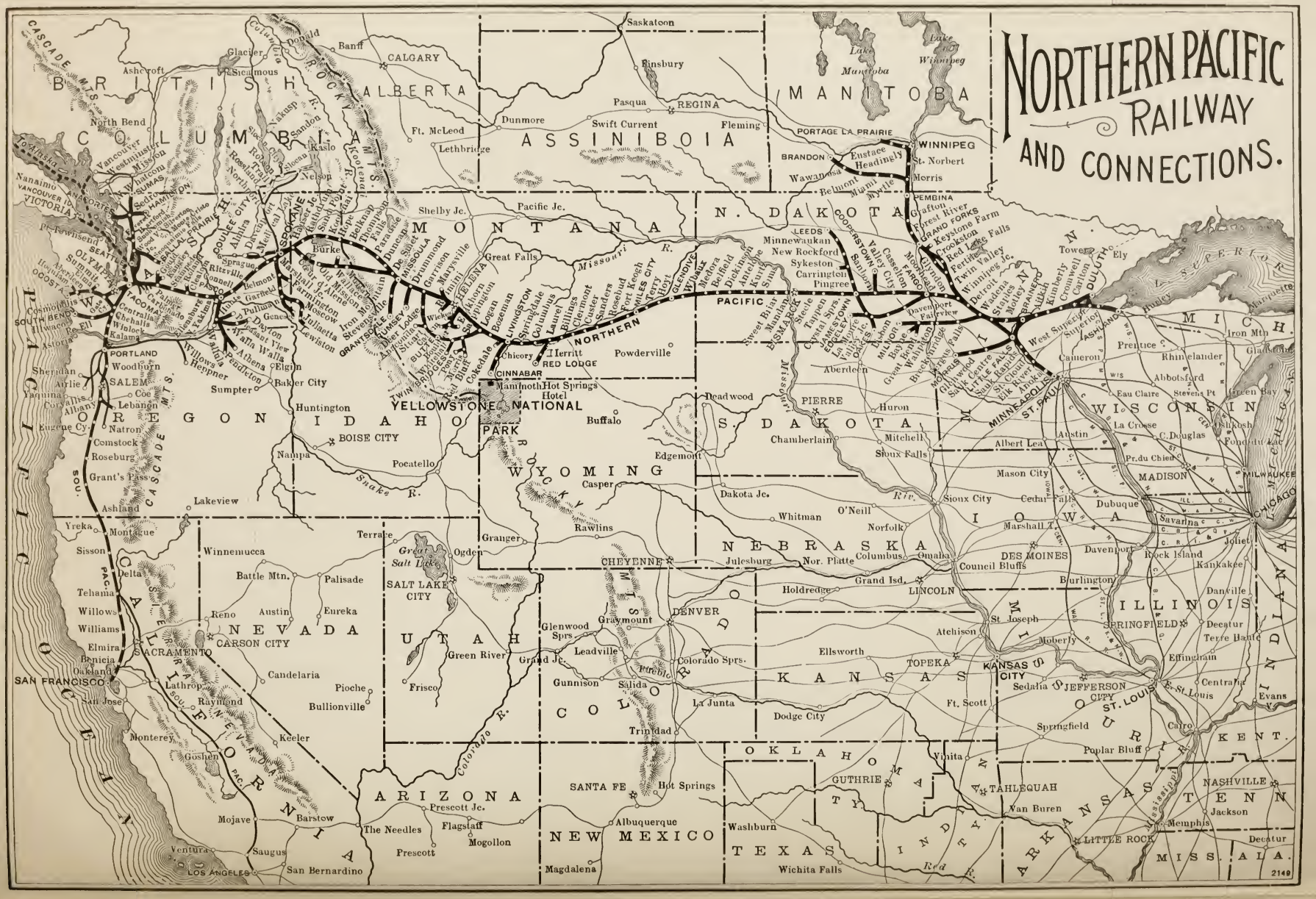
At the eastern termini of the southern transcontinental lines excursion tickets will be sold, or orders exchanged, for tickets to San Francisco, returning via either the Shasta Route, the all-rail line to Portland, or the ocean and the Northern Pacific to St. Paul, Minneapolis, or Duluth, at a rate $13.50 higher than the current excursion rate in effect between Missouri River points, Mineola, or Houston and San Francisco. The steamship coupon includes first-class cabin passage and meals between San Francisco and Portland.

Return coupons reading from Missouri River points to Chicago or St. Louis will be honored from St. Paul or Minneapolis, either free, or with a small additional charge, according to route.

These excursion tickets allow nine months' time for the round trip; sixty days allowed for west-bound trip up to first Pacific Coast common point; return any time within final limit.

GENERAL AND DISTRICT PASSENGER AGENTS.

H. W. SWEET, District Passenger Agent .....230 Washington Street, Boston, Mass.
THOS. HENRY, Can. Pass'r and Fit. Agent..... 128 St. James Street, Montreal, Que.
GEO. W. McCASKEY, District Passenger Agent..... 83 York St., Toronto, Ont.
J. H. ROGERS, JR., District Pass'r Agent..47 South Third Street, Philadelphia, Pa.
WM. G. MASON, District Passenger Agent.....215 Ellicott Square, Buffalo, N. Y.
ED. C. SCHOEN, District Passenger Agent....1118 Carnegie Building, Pittsburg, Pa.
W. H. WHITAKER, District Passenger Agent 153 Jefferson Avenue, Detroit, Mich.
J. J. FERRY, District Passenger Agent.....32 Carew Building, Cincinnati, Ohio.
JNO. E. TURNER, District Passenger Agent....42 Jackson Place, Indianapolis, Ind.
C. G. LEMMON, District Passenger Agent ..... 208 South Clark Street, Chicago, Ill.
C. C. MORDOUGH, District Passenger Agent ..... 377 Broadway, Milwaukee, Wis.
P. H. NOEL, District Passenger Agent.....210 Commercial Building, St. Louis, Mo.
GEO. D. ROGERS, District Passenger Agent Fourth and Broadway, St. Paul, Minn.
G. W JONES, District Passenger Agent..503 West Locust Street, Des Moines, Iowa.
F. O'NEILL, District Passenger Agent ..... 255 Morrison Street, Portland, Ore.
E. L. RAYBURN, Traveling Passenger Agent....255 Morrison Street, Portland, Ore.
W. F. MERSHON, General Agent Pass'r Department. 319 Broadway, New York City.
F. H. FOGARTY, General Agent.....208 South Clark Street, Chicago, Ill.
R. A. EVA, General Agent..... ...Hotel Spalding, Duluth, Minn.
F. C. JACKSON, Assistant General Agent..... .....West Superior, Wis.
H. SWINFORD, General Agent.... ....Manitoba Hotel, Winnipeg, Manitoba.
A. D. EDGAR, General Agent.....Corner Main and Grand streets, Helena, Mont
W. M. TUOHY, General Agent.....354 Main Street, Butte, Mont.
F. D. GIBBS, General Agent...Corner Riverside and Howard streets, Spokane, Wash.
I. A. NADEAU, General Agent.....Corner First and Yesler Avenue, Seattle, Wash.
A. TINLING, General Agent..... 925 Pacific Avenue, Tacoma, Wash.
T. K. STATELER, Gen'l Agent Pass'r Department, 638 Market St., San Francisco, Cal.
A. D. CHARLTON, Assistant General Pass'r Agent, 255 Morrison St., Portland, Ore.
A. L. CRAIG, Assistant General Ticket Agent .... St. Paul, Minn.
CHAS. S. FEE, General Passenger and Ticket Agent..... ..... St. Paul, Minn.
J. M. HANNAFORD, General Traffic Manager ....St. Paul, Minn.


NORTHERN PACIFIC RAILWAY AND CONNECTIONS.
BRITISH COLUMBIA
ALBERTA
ASSINIBOIA
MANITOBA
MONTANA
N. DAKOTA
S. DAKOTA
WYOMING
IDAHO
OREGON
WASH.
CALIFORNIA
NEVADA
UTAH
ARIZONA
COLORADO
NEW MEXICO
KANSAS
NEBRASKA
IOWA
MINN.
WISCONSIN
MICH.
ILLINOIS
INDIANA
MISSOURI
KENT.
TENN.
ARKANSAS
OKLAHOMA
TEXAS
INDIAN TY.
MISS.
ALA.
PACIFIC OCEAN
YELLOWSTONE NATIONAL PARK
CASCADE MTS.
ROCKY MTS.
Lake Manitoba
Lake Winnipeg
Lake Superior
Great Salt Lake
Missouri R.
Snake R.
Colorado R.
Red R.
Mississippi R.
Saskatoon
Finsbury
Pasqua
REGINA
Dunmore
Swift Current
Fleming
Ft. McLeod
Lethbridge
CALGARY
Banff
Glacier
Sicamous
Ashcroft
North Bend
Vancouver
Westminster
Mission
Whatcom
Sumas
Nanaimo
VANCOUVER
VICTORIA
Pt. Townsend
SEATTLE
OLYMPIA
Summit
Aberdeen
Hoquiam
OCOSTA
Cosmopolis
SOUTH BEND
Ilwaco
Pe Ell
Astoria
Kalama
Winlock
Chehalis
Centralia
Palmer
Carbonado
Ellensburg
Yakima
Pasco
Ritzville
Sprague
Belmont
Garfield
Pullman
Genesee
Dayton
Walla Walla
Athena
Pendleton
Elgin
Baker City
Sumpter
Huntington
Willows
Heppner
Wallula
Lewiston
Julietta
Moscow
Farmington
Marshall Jc.
Cedar Jc.
Rathdrum
Hope
Belknap
Thompson Falls
Paradise
Dunean
De Smet
Missoula
Drummond
Garrison
Marysville
Helena
Wickes
Kalispell
Bozeman
Logan
Springdale
Columbus
Laurel
Billings
Clermont
Custer
Sanders
Rosebud
Fort Keogh
Miles City
Terry
Hoyt
Glendive
Wibaux
Medora
Belfield
Dickinson
Antelope
Kurtz
Sims
Shelby Jc.
Pacific Jc.
Great Falls
Chicory
Cokedale
Red Bluff
Cinnabar
Mammoth
Hot Springs
Hotel
Ferritt
RED LODGE
Powderville
Buffalo
Deadwood
Edgemont
Casper
Rawlins
Granger
Ogden
Terrace
Winnemucca
Battle Mtn.
Palisade
Eureka
Austin
Reno
CARSON CITY
Candelaria
Pioche
Bullionville
Keeler
Goshen
Monterey
Lathrop
Raymond
San Jose
Oakland
SAN FRANCISCO
Benicia
Elmira
Williams
Willows
Tehama
Delta
Sisson
Montague
Yreka
Ashland
Lakeview
Natron
Comstock
Roseburg
Grant's Pass
Eugene Cy.
Albany
Corvallis
Yaquina
Airlie
Sheridan
Woodburn
SALEM
Coe
Lebanon
PORTLAND
Kalama
Chehalis
Centralia
Palmer
Carbonado
Ellensburg
Yakima
Pasco
Ritzville
Sprague
Belmont
Garfield
Pullman
Genesee
Dayton
Walla Walla
Athena
Pendleton
Elgin
Baker City
Sumpter
Huntington
BOISE CITY
Nampa
Pocatello
Lakeview
Ashland
Montague
Yreka
Sisson
Delta
Tehama
Willows
Williams
Elmira
Benicia
Oakland
SAN FRANCISCO
Monterey
Mojave
Barstow
Ventura
Saugus
LOS ANGELES
San Bernardino
Prescott Jc.
The Needles
Flagstaff
Prescott
Mogollon
Great Salt Lake
SALT LAKE CITY
Green River
Frisco
Glenwood Sprs.
Grand Jc.
Leadville
Gunnison
Salida
Graymount
DENVER
Colorado Sprs.
Pueblo
La Junta
Trinidad
SANTA FE
Hot Springs
Albuquerque
Magdalena
Washburn
Wichita Falls
Dodge City
Ellsworth
Atchison
St. Joseph
TOPEKA
KANSAS CITY
Sedalia
JEFFERSON CITY
Ft. Scott
Springfield
Poplar Bluff
Vinita
GUTHRIE
TAHLEQUAH
Van Buren
LITTLE ROCK
Memphis
Jackson
NASHVILLE
Decatur
Evans
Cairo
Kankakee
Joliet
Savanna
Rock Island
Davenport
Burlington
Danville
Decatur
Terre Haute
Effingham
Centralia
St. Louis
Evans
Dubuque
Cedar Falls
Mason City
Albert Lea
Austin
La Crosse
C. Douglas
Pr. du Chien
MADISON
MILWAUKEE
CHICAGO
Oshkosh
Fond du Lac
Green Bay
Stevens Pt
Abbotsford
Rhinelander
Prentice
Cameron
Iron Mtn
Gladstone
Marquette
Hurley
Ely
Tower
Superior
West Superior
Ashland
Duluth
Kimberly
Cromwell
Carlton
Brainerd
Aitkin
Minneapolis
St. Paul
Mitchell
Sioux Falls
Huron
PIERRE
Chamberlain
Aberdeen
Mitchell
Sioux City
Norfolk
O'Neill
Whitman
Julesburg
Nor. Platte
Columbus
Omaha
Council Bluffs
DES MOINES
Grand Isd.
LINCOLN
Holdredge
Dakota Jc.
Sioux City
Cedar Falls
Mason City
Albert Lea
Austin
Dubuque
Savanna
Rock Island
Davenport
Burlington
Kankakee
Danville
Decatur
Terre Haute
Effingham
Centralia
St. Louis
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Poplar Bluff
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Ft. Scott
Sedalia
Moberly
Atchison
Ellsworth
Dodge City
Vinita
Washburn
Wichita Falls
Red R.
Mississippi R.
Lake Superior
Lake Winnipeg
Lake Manitoba
PORTAGE LA PRAIRIE
WINNIPEG
BRANDON
Eustace
Headingly
St. Norbert
Morris
Wawanosa
Belmont
Miami
Myrtle
PEMBINA
Grafton
Forest River
GRAND FORKS
Keystone Farm
Crookston
Red Lake Falls
Fertile
Twin Valley
Winnipeg Jc.
Detroit
Wadena
Staples
Motley
Kimberly
Cromwell
Carlton
Brainerd
Aitkin
Minneapolis
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Davenport
Fairview
Glendive
Wibaux
Fort Keogh
Miles City
Terry
Hoyt
Sanders
Custer
Clermont
Billings
Columbus
Laurel
Springdale
Bozeman
Logan
Livingston
Bozeman
Cokedale
Red Bluff
Cinnabar
Hot Springs
Hotel
Mammoth
Ferritt
Powderville
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Wichita Falls
Red R.
Mississippi R.
Lake Superior
Lake Winnipeg
Lake Manitoba
PACIFIC
NORTHERN
YELLOWSTONE NATIONAL PARK
CASCADE MTS.
ROCKY MTS.
Snake R.
Colorado R.
Missouri R.
Great Salt Lake
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WONDERLAND '98